AMERICAN BEE JOURNAL

GERTRUDE BURDETT
Montana Honey Queen

Vol. 96 No. 6 JUNE 195

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THE AMERICAN BEE JOURNAL

HAMILTON, ILLINOIS

Vol. 96, No. 6 June, 1956

Editor—G. H. Cale
Associate Editors—M. G. Dadant, Roy A. Grout
Managing Editor—Adelaide Larson

Published monthly at Hamilton, Illinois. Entered as second-class matter at the Post Office, Hamilton, Ill. In the United States, Canada and Mexico, $2.00 a year; two years $3.50; three years $5.00. Foreign $2.50 a year; two years $4.50; three years $6.50. Subscription stopped at expiration date printed on wrapper. Available on micro-film at moderate prices by writing to University Microfilms, Ann Arbor, Michigan.

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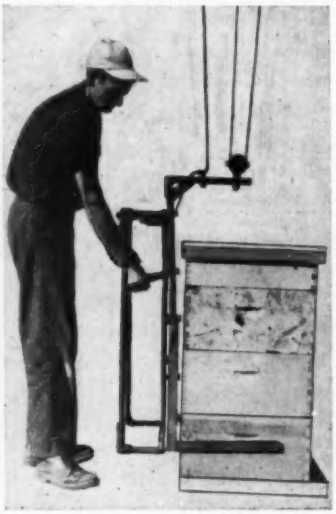

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	1-25	25-50	50-100
2 lb. pkg. w/q	$3.70	$3.45	$3.20
3 lb. pkg. w/q	4.60	4.30	4.00
4 lb. pkg. w/q	5.50	5.15	4.80
5 lb. pkg. w/q	6.40	6.00	5.60
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Queens	1.35	1.25	1.15

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Prices are a little cheaper for June
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4 lb. package with queen..... 4.65
5 lb. package with queen..... 5.50
Queens.....$1.00
Raymond McFarling
Rt. 3, Tupelo, Miss.

The Business Beekeeper

Comb Honey Production In Central Florida

by Roger A. Morse

State Plant Board

Gainesville, Florida

The greatest art in beekeeping is the production of comb or section honey. The goal of every comb honey producer is not the production of a few perfect sections but rather the production of whole supers of perfect sections. The beekeeping literature mentions a number of men who were successful in comb honey production but probably the most successful and best known was Dr. C. C. Miller.

Dr. Miller started keeping bees in 1861 and from 1878 until he died at the age of ninety, in 1920, it was his sole business. He wrote many articles and three books on beekeeping. His last book, "Fifty Years Among the Bees," the last edition of which was published in 1920, was printed by the A. I. Root Company. It is still considered the "bible" of beekeeping by many comb honey producers including Mr. Clarence Schrader of Waterville, New York, and Tavares, Florida.

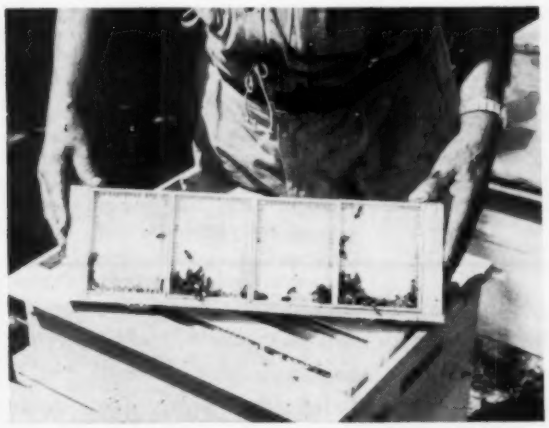
A visit was made to Mr. Schrader's beeyards during the orange honeyflow this spring and some notes made along with a few pictures of his equipment and bees.

The colonies used for comb honey production fill two deep, ten frame, hives prior to the honeyflow. As soon as the flow begins, the colonies are reduced to a single story, putting all the combs of capped brood down into the brood nest. The best colonies will have eight such frames. Where a colony has more than eight frames of capped brood, the extra brood is given to those colonies with less than eight frames. The combs containing eggs and larvae are set aside and given weak colonies or nucs.

Placing full, capped combs of brood down in the bottom hive is very important in comb honey production. Not only will the bees which are about to emerge be able to take over some of the chores in the hive and thus free more bees for field work, but the queen will have room to lay eggs almost immediately. If combs of eggs or young larvae are placed in the broodnest, the colony must spend a great deal of its time tending and feeding the larvae. In addition, the queen will have no place to lay, and a sense of crowding, which encourages swarming, will develop.

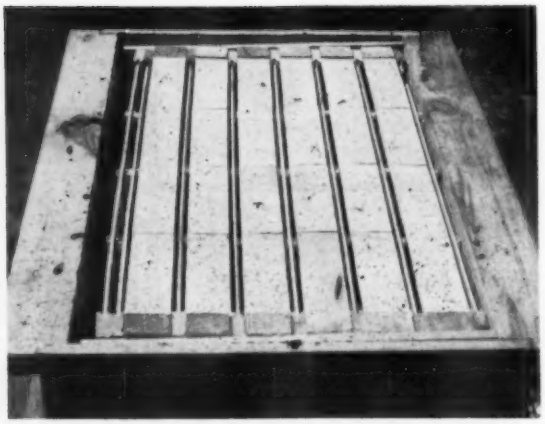
One or two comb honey supers are placed on the colony at the start of the flow. Only the very strong colonies receive two comb honey supers.

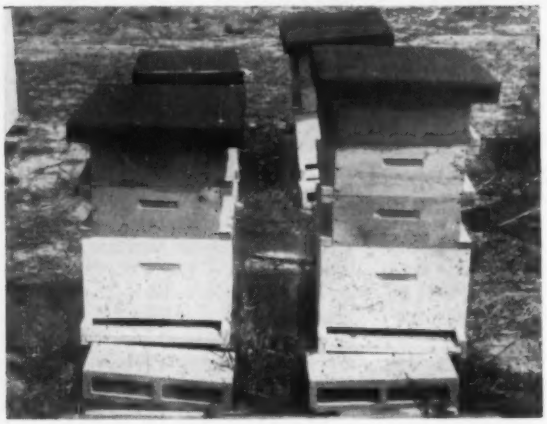
The comb honey super pictured has several advantages. Not only is the super contracted on the sides but also on the ends because 4 by 5 rather than 4¼ by 4¼ sections are used.



Four 4 x 5 sections, well filled and ready for market.

One of Mr. Schrader's homemade separators.





Top left, two comb honey supers, one lifted above the other to show their construction. A closer view, top right, to show how the supers are made. Bottom left, the colonies for comb honey production are reduced to one body and the narrower supers are placed on top as they are needed.

This contracts the storage area one half inch on each end. Thus THE SECTIONS ARE PLACED IMMEDIATELY ABOVE THE BROOD NEST AND NOT ABOVE THE SIDE COMBS OR THE ENDS OF THE BROOD NEST WHERE THE BEES ARE NOT INCLINED TO HAVE BROOD. The idea of contracting or centering the sections above the brood nest is not at all new but has been well known for years. It was, in fact, one of the cardinal principles of Dr. Miller. Since some special equipment is required, many beekeepers are prone to overlook the matter. A standard ten frame comb honey super can be fitted to carry six section holders rather than seven by placing a board three-quarters of an inch thick on the inside of each side of the super.

Ten days after the colonies have been reduced to one hive and the first super(s) of sections added, the colonies are checked for queen cells. At this time all cells are cut out. Additional supers are added when the side sections in the first super(s) are three-quarters drawn out and filled with honey. Unlike extracted honey production, comb honey supers should not be added too rapidly. It is, at the same time, important that the adding of supers not be delayed too long.

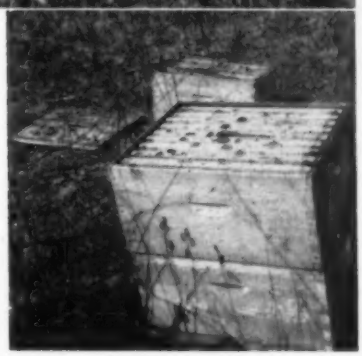
A second inspection is made ten days after the first. Queen cells are again cut out and the colonies with and without cells are so marked. Supers are added as needed.

On the third inspection, again in ten days, breeder queens are selected. Those colonies which have produced well and have not shown swarming tendencies on this and the previous inspection are selected as breeders. Cells are cut from those colonies still showing swarming tendencies and combs of brood may be removed to relieve conjested colonies. The combs of brood which are removed are given to weak colonies or nucs.

The sections are removed with a carbolic acid pad. Usually, Mr. Schrader goes through all colonies and puts those supers to be removed on top. After all supers are on top and marked, a second trip through the yard is made removing the honey. Great care must be taken to make sure that all bees are removed so that none of the cells will be opened and the sections ruined.

The production of comb honey requires a good knowledge of bee behavior and attention to detail. The pictures here demonstrate the success of the proper method.

We have been asking for commercial contributions for this department and so far we have been fairly well favored. Please keep up the good work. Just put your ideas on paper, and we will do the rest. Like nice pictures too. Material from the east and south is particularly needed as readers in those sections complain that they don't get enough to suit them for their kind of management.



Top left, inspecting should be done during a honeyflow. Top right, most North Jersey beekeepers leave their crop on in August as in this yard. The less time colonies are left open (see the two in above picture) the better the chances of avoiding robbing. Both these colonies are a wide open invitation.

Robbing

by M. H. Stricker

Robbing has upset a good many honey crops in this state, (New Jersey), not only in the hobbyist apiaries, but also in the commercial apiaries.

There are many procedures for combatting it once it is recognized, but usually it happens when the hobbyist is away from home or the commercialist is not in the outyard. In this last case, robbing can become so extensive that the apiary becomes decimated and the remaining colonies so demoralized that they never produce a crop.

If caught in time, reducing the entrance or completely stuffing the entrances of the weak colonies with green grass will sometimes stop robbing before it goes any further.

If this does not help, move the colony being robbed and put in its place a hive body containing a comb of honey, and place a teaspoon of cyanide on the bottom board. Place a cover on top. The robbers will be killed instantly, eliminating them from future robbing and so reducing the population of the robber colony or colonies in the area that they will begin to defend themselves instead of sending out their "freeloaders."

In the "robbing" season, some New Jersey beekeepers start these robber traps and keep them supplied with cyanide, which does keep robbers from getting a start. That does seem to be the crux of the problem; it is far easier to keep it from ever getting started, than fighting it after it is once started.

Beekeepers in the northern part of the state know from long experience that robbing is easiest to start in late March, all of the month of August, and the first week of October. Now this doesn't mean that robbing cannot start at other times, but mainly, robbing is mostly incited then.

Keeping these three dates in mind, the beekeeper can make certain plans, such as: Getting his early spring inspection done before the last week in March, when cold winds, and thirty degree nights will still discourage robber bees from circulating. Also, he can do his inspecting late in the afternoon so that bees will settle down and probably forget their robbing tendencies overnight.

If his inspection does carry over into the last two weeks of March, it would be wise to keep second stories covered if they are lifted off to inspect the bottom chamber, or clean bottom boards. Care in not leaving any broken bits of comb, especially those bits containing honey, lying around, will also help. Also, the less time a colony is kept open at this time of the year, the better.

Weak colonies at this time of the year are usually united, two or more together, to guard against robbing. Then in the late spring inspection, the cause of this weakness can be corrected, but in the meantime, the weak that were united have been built up and have been strong enough to resist the robbing of their neighbors.

All through the summer, the commercial beekeepers, who manage yards instead of individual colonies, practice this "picking up" weak colonies and uniting to discourage robbing, which would distract colonies before the main honeyflow begins This procedure will tend to keep all colonies in a yard strong and strong colonies are very seldom robbed out.

When the honeyflow once begins, the danger of robbing is over, but then when the complete dearth, found in this area all through August, comes along, leaving each colony with a barrel full of bees and nothing to do but look for trouble, North Jersey beekeepers begin to worry. Though there is honey ripened and ready to

be extracted, most every beekeeper leaves it on until September when the fall flow makes robbing less dangerous. Beekeepers in this area try to get all inspecting, and requeening done before August. In fact, the less work done in the bee yard in August, the better beekeepers like it, because August robbing is easy to incite and almost impossible to stop.

If robbing does get underway at this time, beekeepers usually go in and remove the covers and inner covers of all colonies in the offending yard, thus putting them all on the defensive. This was usually thought a foolproof system until two years ago, when a beekeeper who tried it found it wasn't his colonies doing the robbing; it was neighborhood bees, and he helped them by removing the covers.

Many plans were tried, but finally this whole apiary had to be removed to a different location to stop the damage.

When robbing is found, it would be wise to dust some of the robbers with flour and see where they are coming from before using any plan. If it is found that the robbers are coming from one certain colony, the positions of the robbed, and robber can be switched, and if done before robbing has advanced too much, this will usually curtail the robbers. Or, the colony doing the robbing can be opened, and a few of its combs containing capped honey may be scraped with a hive tool, allowing them to bleed enough to occupy the inhabitants in cleaning up so they neglect their supposed duty of robbing.

Carbolic acid can be used as a repellent by spraying or painting a weak solution on covers and supers that are not absolutely beeproof. This same solution can be sprayed around the reduced entrances of weak colonies. Some beekeepers use kerosene the same way and it is satisfactory, and some mix kerosene with a small amount of motor oil, claiming it has greater staying power, but it is a little unsightly on equipment painted white.

In the fall, most robbing is often started by beekeepers placing extracted supers out on the bees to be dried up in the daytime. This always starts a picnic and results in demoralizing and robbing.

These "wet" supers should always be returned to the apiary in the evening so that the "roar" of the excited colonies receiving these supers will be quieted down by morning. By dawn, the colonies will have become adjusted so the flying bees can even lick off the sticky outsides of supers without causing an uproar.

Sometimes when "winterizing" colonies, robbing can begin, but usually beekeepers are constricting the entrance at this time and uniting any weak colonies, so that robbing does not get too much of a start.

Every once in awhile a beekeeper mentions that robbing has caused him trouble but usually he will admit that had he been a little more careful, it wouldn't have happened, and he usually takes steps so that it doesn't happen again.

New Jersey

The Menace of Spray Poisons To Bees

as used by Virginia Farmers

by C. R. WILLEY
State Entomologist

That spray poisons have been, and are now, a menace to bees is attested to by the discussions of the subject in bee literature and scientific papers.

It appears that this poison problem began in the early 1870's when it was discovered that bees were being killed by Paris green when used to spray apple trees when in bloom. In 1888 scientists in Colorado and Michigan, from experiments of feeding bees syrup containing London purple and Paris green, found that the bees died quickly and that arsenic was found in the dead bees. From 1891 through 1895 more work was done on the problem at the Ohio Experiment Station, which bore out strongly and without contradiction that bees were killed by poisoning when apple trees were sprayed when in bloom.

The cheap manufacture of calcium arsenate and its use as a dust applied by airplane about wiped out beekeeping in the cotton belt and in other areas where this practice was pursued. Apparently from 1920 until 1946 — the advent of synthetic insecticides — calcium arsenate was used in increasing amounts. It seems however, that the danger of poisoning did not always lie in the crop being protected, which might be unattractive to bees, but in attractive plants growing in the environs of the fields on to which the poison dusts drifted.

What has been said so far might indicate that only arsenical poisons used as sprays are a menace to bees. For a long time they were; and the study devoted to them laid the foundation for any study devoted to newer insecticides.

From what we have seen so far, we feel safe in saying that the menace of arsenicals as poisons to bees was rather in direct proportion to the care in the use of the insecticide; the timing in reference to bloom; the method and carefulness in relation to the crop being protected; and the consideration of the flora on the surrounding areas.

The advent of synthetic insecticides has brought new problems. They differ from the arsenicals because of their chemical make up and consequent effect on the bees. Much work is being done on their poisonous effect on bees. Some are highly toxic to honeybees; some are moderately toxic, while some are relatively safe. Various lists have been established by scientists in different parts of the country. Some of these are published in the bee journals and they can be secured from the Extension Service through your county agent as can spray programs for the various crops. Spray programs covering orchard and field crops in Virginia take into consideration the bee poisoning problem and recommend spray materials and timing accordingly. The 1956 Virginia spray bulletin says "Materials highly toxic to bees are: dieldrin, BHC, lindane, parathion, malathion, endrin and chlordane. Materials with lesser toxicity include DDT, methoxychlor, TDE, Aramite."

Systox or Demeton is pointed out in several publications as an insecticide that looks safe for bees. Toxaphene, according to advertisement,

has only a minor effect on bees. Sufficiently harmless to honeybees for use when alfalfa is blooming.

That most insecticides — spray poisons—are toxic to and are therefore a menace to honeybees there is no doubt. If the beekeepers, the farmers and orchardists will get together and work together, as they can, use the materials, methods, timing and care as recommended by the spray program the problem will be solved.

Management in the Early Season

by Wm. Judd

We operate our colonies in three brood chambers the year around. We like to check the colonies in February, if at all possible, removing all dead colonies, raising the covers and checking the size of the clusters. If colonies are weak, we check them at this time to see why they are weak. We do not want any colonies that are not able to take care of themselves as robbing is apt to disorganize the whole yard and keep you from doing any work.

At this time we also check for stores. We want to be sure that each colony has plenty of food to build up on.

We find, that by being careful, we can, although nothing is coming in, work all day in a yard without too much trouble. We carry with us four burlap covers. They can be made from bags or anything that will cover a whole hive body. We even keep the one we are working on covered, all except the comb we are examining. Sounds like a lot of work but you can get more done than you could with robber bees pestering around.

As soon as the weather is warm enough, we check all colonies for disease, and clip the queen's wing on one side and put a little spot of paint on her thorax between her wings. We use a different color each year so we know the age of our queens.

If a colony has bees and brood in two bodies, we put on supers at this time, about the 10th of April. We try to get around to all colonies before dandelion and fruit bloom. This is very important in swarm control and if the colonies are quite strong, two supers are put on.

In the first supers we put on, we place frames of foundation in the center of each super, because in a phase of a worker bee's life, she becomes a comb builder and by giving foundation to be drawn out it gives them something to do instead of just loafing around and causing conjestion in the brood chamber. With plenty of honey in the hive we have had them drawing out foundation in the supers before dandelion and fruit bloom.

Good queens and plenty of room are our main reliance for swarm control. We also check for queen cells every 2 weeks, destroying all cells as long as we find eggs or young larvae. If sealed cells are found, we sort out 10 empty combs, put them in a hive body and set it on the bottom board. If the queen has not shrunk up ready to swarm, we put her in the empty chamber on the bottom board. If she is shrunk up, we kill her and put a sealed cell in the brood chamber on the bottom board. On this, we put 3 supers, placing the inner cover on the supers with the escape hole covered. On top of this, we put the brood making an entrance at the back. We do not cut cells. We let the bees take care of them. Nearly all the old bees will go down to the bottom chambers.

In about two weeks there will be a young laying queen in the top. If the old queen is in the bottom, she can be killed and the 2 brood chambers set down on the bottom chamber putting the supers above. We get as much or nearly as much as if they hadn't started cells. If there is a young queen below, the one on top can be set off for increase if wanted.

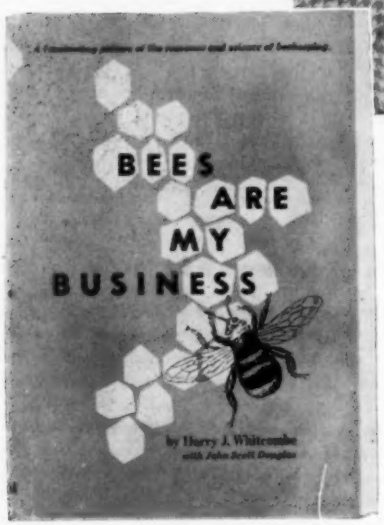
We have never had one to swarm out by keeping plenty of room and good queens and keeping ahead of the bees. We are not bothered too much with swarming. Less than 10% of our colonies even started cells last year, with about 8 swarms out of 800 colonies. We do all top supering. We averaged about 205 lbs. of honey per colony last year in a No. 2 district of our state.

We do not practice annual requeening. We have 70 mating nucs and we keep an extra supply of young queens on hand all summer. We take a few queens with us every day and if we find a queen that is failing, we kill her and release a young laying queen on the same comb. A laying queen will almost always be accepted but do not try this with a shipped in queen that is not laying.

Wisconsin

Our Cover Picture

Gertrude Burdett, Montana Honey Queen from Laurel, Montana, with L. E. Baldwin, Ft. Shaw, the King, photographed at the state meeting in December. Mrs. Burdett says: "I am much the oldest Queen there is likely to be as I have passed the Biblical age for most people. But I enjoy life as I go along. Crowning Mr. Baldwin as the King was in honor of his wonderful courtesy and help to the Association. He is a retired minister but still very active and a good commercial bee man." Thanks, Mrs. Burdett. But what about you? Let Mr. Baldwin, tell us: "Mrs. Burdett came to Montana in 1913 and joined the association in 1929. She was elected President in 1931. She then became Secretary-Treasurer and in that capacity she has served continuously. She has been most active in promoting the interests of Montana beekeeping, from lobbying for our law and being our delegate to the Federation Convention at Salt Lake. Her civic interests include 4-H Club work, Girl Scouts and fraternal organizations. She worked with her husband in the bee yards until his death." Thanks, King and Queen, for a good story of a devoted member of our craft.



In this book the story of Harry Whitcombe's experience and philosophy reads like a novel. "Bees are my Business" is the first life story of one man in beekeeping. The book is published by G. P. Putman's Sons, New York, and was written in collaboration with John Scott Douglas, also a beekeeper and a writer. Most of the material in this story has been taken from "Bees are my Business."

Harry J. Whitcombe

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Symbol of the Best

This phrase, symbol of the best, characterizes Harry Whitcombe. A graduate of the University of California with the world to choose from, Harry chose beekeeping and he has risen to a top place as a honey producer, breeder of bees and as a pollinator of California crops. His success illuminates the pathway for young beekeepers to teach them that they can succeed too in making beekeeping a wonderful way of life.

Bees Are My Business

by Harry Whitcombe

I was seven years old when I persuaded my father to let me have a colony of bees and from that day on bees *have been my business.* While I was in high school, during the depression years, the bees and their honey helped to balance the family budget. Later the sale of one hundred colonies paid my way through college.

In my boyhood my curiosity was aroused by long stands of bees on different farms or ranches. At seven I could not resist the curiosity that impelled me to see just how bees lived and I would watch the bees in the orchard hives.

The bee fever began in earnest one day when I was thus engaged watching Wilbur Darst working the colonies. I was soon working for Darst and coming home with coins in my pocket to save to buy bees. I visited L. L. Andrews, recently deceased, one of California's famous beekeepers, and he found for me two colonies in eight-frame hives. My father thought that a few bee stings would abate my interest but they only served to increase it. By the time I was a sophomore I had forty five colonies and I was soon considering making bees a life work

The College of Agriculture at Davis offered the kind of training I needed but I had to sell my bees to pay the entrance fee. I was a lab assistant for Dr. J. E. Eckert and, with the company of others, Eugene Walker of Gridley, Art Harrison of Los Banos, now well known beekeepers in California, and Charles Justus presently Yolo County Bee Inspector, who also planned to become beekeepers, knocked hives together whenever there was time. When a swarm was reported we would make a dash to secure the bees. Soon I was a part time employee of the U.S.D.A. Bee Culture Laboratory working with Frank Todd and George Vansell.

By the end of that year I again worked for Wilbur Darst and Andrews. After extracting was over, I was recommended to J. E. Maurer who was ill and wanted his honey extracted. Before returning to school I divided many of Maurer's colonies and continued to do this for two summers. Finally I became Maurer's foreman and was later in complete charge of the business that had grown to nearly 1,400 colonies.

In 1936, I met Marie Olsson at a college dance. Her father was one of the highest ranking harbor pilots in San Francisco, and Marie was a secretary on Sunset Magazine but when I escorted her home from the dance the romance started. That fall Marie gave up her career for marriage.

In the fall of 1937, we both went back to the University for final courses for graduation, the money for which came from the sale of honey. In March, J. E. Patton, of Lamoille, Nevada, offered me half of his honey from 500 colonies in return for managing his bees. I moved my 200 colonies from Davis into the Sierra foothills and went to Nevada with Marie.

We lived in a corner of Patton's warehouse with only $90 in our pockets. I had never seen such a honeyflow as that first season. We emerged from it with a net from the honey of over $5,000 and my share made it possible for us to build a solid foundation under our beekeeping business.

Then came the disaster of loss from bears and buckeye poisoning in the Sierras which left us with only 100 colonies, so Marie went to work at the University and I went back to the bee laboratory. However, with the profits from the Nevada venture I built three houses, one of which we made our home and the others we rented. I took out a contractor's license and began to build houses for others and didn't have nearly as much time for the bees as I should have had. Yet I continued to acquire bees, among them those which belonged to Art McNay, one of the first to use artificial insemination in bee breeding. He left Davis in 1940 to work at the Bee Culture Laboratory at Baton Rouge, and died suddenly a few days after his arrival there. These made the basis for my package business because the McNay strain was very good.

Again with hundreds of colonies to care for I had no time for house building. I bought bees with money that Marie had saved for the birth of our first baby. It did not please Marie!!! Fortunately, I sold enough honey to pay the loan and cover the expenses. That was an eventful year, for besides becoming parents, we had acquired enough bees to build up our apiaries from a few hundred to 1500

Whitcombe examines a hive in a field colony. (Photo by Robert Loranger. From "Bees Are My Business.")

colonies; enough, we hoped to support a young couple with a young son and enlarge our package-bee business.

We had a good honey crop that year but I refused to sell the honey. When the crop went into the cans the cans overflowed the warehouse and were even piled outside against the walls. Still I refused to sell. I would not sell the honey for 4¢ or 5¢ a pound because it would barely cover costs at that figure. So I held out against all offers until I found a chance to sell the entire amount for 10¢ and I could pay off all of our loans and have capital for expansion.

I built a larger warehouse. I felt that the production of package bees and queens would grow and that farmers would need bees in crop pollination. The warehouse was complete in less than 3 weeks and then I set my crew packaging bees for orders which had been received during the time of construction. During the peak of this season I acquired 1400 more colonies.

With my 1942 honey crop sold and the colonies in winter quarters I was asked by the Boyden-Hansen Co. to take charge of their plant. I found that honey was stacked up high and I had to grade it and dispose of it. In three months time I helped pack the most honey they had ever put up in that length of time and I earned 4 or 5 hundred dollars a month in what would have otherwise been a slack period.

In spring, because of heavy demands of labor for other purposes and because of the demand in the services, we had only 4 boys to help us make up the thousands of packages to fill spring orders and to help in

*The use of the title and contents of "Bees are my Business" is with permission of the publishers, G. P. Putman's Sons, New York.

The home place, one to be proud of.
(The Portrait House, Davis, Cal.)

Yard and pool. Harry and Marie relax. John in the water, Kenneth about to dive. Nancy and Calico watch. (Loranger)

moving the bees for pollination. Finally three of these enlisted and left me with only 1, a 4-F deferment. Moving 3800 colonies for pollination fell largely on me and I worked around the clock.

I was offered a commission with the Sea Bees because of my contracting experience. However, when it was found that my bees were being used for pollination and that my package bees were also being used in part for that, my draft board refused to accept me for service and I was told to keep on with my work.

We ran into considerable trouble from arsenical dusting and by 1943 operations were becoming difficult. Nothing the beekeeper could say would convince farmers that the indiscriminate use of arsenicals would affect their own crops. Apiaries built back in spring began to melt away in summer when tomato-growers started crop dusting. By fall, I could no longer take the losses. I moved our remaining 1200 colonies northward between Chico and Red Bluff, beyond the tomato-growing belt. My only hope of avoiding the loss was by making aerial observations before I put colonies out for pollination. I would rent a plane at the Airport and fly over the area often seeing a gray pall of dust drifting as much as 10 miles.

Resentment against the unrestrained use of insecticides was simmering and came to a boil in Yolo County where fruit growers, livestock raisers, hay and grain farmers, as well as the beekeepers, rose in protest. We hired a lawyer to draft an ordinance and a hearing was held at Woodman with both sides presenting their cases. Those who represented the farm interests made a poor showing against the hired lawyers of the tomato growers. We had seen orchards without fruit, hay and grain and alfalfa confiscated because of arsenic content, cows dying, hives filled with dead bees. The meeting was finally thrown open for public discussion and finally the chairman declared the board unanimously in favor of passing the Yolo County Ordinance to end unrestricted spraying with dangerous poisons.

In the fall of 1949 the first ordinance was replaced with another more in the interest of both sides of the controversy and there was little further resentment. However, arsenical dusting had practically destroyed the business Marie and I had labored to build. We only had a few more colonies than we had before we left college and it took us seven more years of hard work to repopulate the hives emptied by spray poison.

Also honey prices dropped again so that by the end of 1947 honey brought less than it cost to produce it and I again stored my crop. Many beekeepers went into other work and this in turn caused the package bee business to shrink and a lessened demand for farm products caused the pollination business to shrink.

For years San Francisco had maintained a Farmer's Market, and we decided that if we could sell the honey there it would bring us more than packers could pay. So we packed our honey in five-pound cans for $1.00 each at the Farmer's Market. Customers were few but they soon brought others so before long honey sold briskly. We even bartered honey for produce. We felt prosperous. Finally we built a stand in the market furnished with an observation hive and by the time the annual market fiesta was held we were accepted as part of the family. Soon other beekeepers opened stands however,

and the bonanza was over, (and we could no longer make a go of it.) But honey prices were rising and once more beekeepers were buying bees.

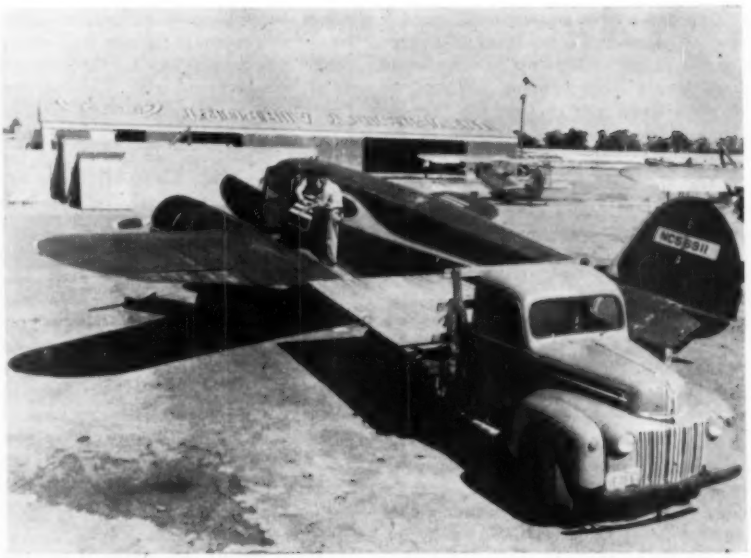
We had begun to consider flying bees to northern customers in 1947, when conditions became so bad. Piloting my own plane made me air-conscious and after new and high express rates had gone into effect, I considered renting a small cargo plane and flying packages myself. I hoped to find other shippers willing to share part of the expense and to help in filling the plane and thus avoid paying for wasted space. The United Airlines would let us charter a DC 3 capable of holding 1,000 packages.

Six shippers were asked to proportion shares of the load so that all the packages would be ready on the same day. That was easy but to find 6 northern buyers along the line of flight ready to receive packages on the same day was a problem and the difficulty of coordinating the plan made us give it up.

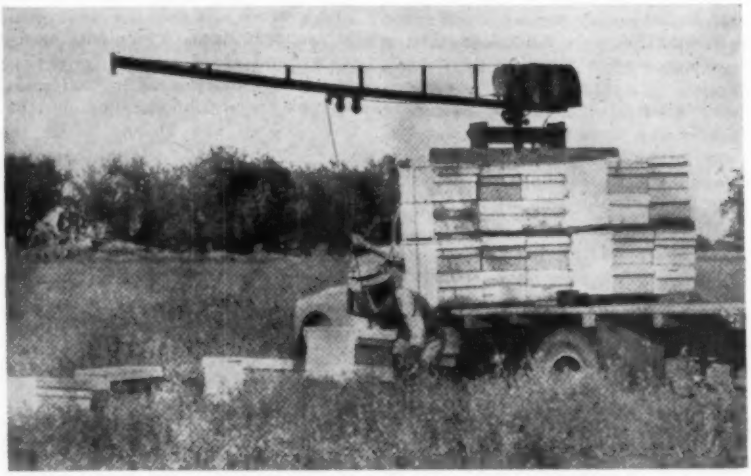
Howard Foster, who had a large outfit at Colusa, California, and another near Butte, Montana, was also disappointed in the outcome of the air line survey. He shipped hundreds of packages to Montana each year. I found that one of my customers in Montana was willing to take hundreds of packages too if I could arrange the flight, so we went to see Dr. Eckert and George Vansell and they agreed to supervise the air shipment. Under the insurance, one of us had to accompany the plane and since I was a licensed pilot I agreed to do so. Another one of the provisions was that the plane must be flown by passenger pilots just because I was to be aboard. After assuring the pilots there was no danger from the bees we were soon on flight and over Donner Summit over 13,000 feet.

I found that the cans of feed flowed freely because of the change in air pressure as the plane climbed or descended. The syrup flowed so rapidly it seeped through the packages.

At Salt Lake City the plane was refueled and a new set of pilots took over. The heat had to be turned on as the bees were becoming cold. The country below was in the grip of winter. Soon we were at Great Falls and slanting down for a landing. By this time there was enough syrup on the floor to cause us to slide in various directions. My customer, Buhmann, was there ready to transfer the packages to his truck. He was enthusiastic about this air shipment and neither he nor his son in unloading the plane discovered more than a few dead bees in any package. Then we flew on to Butte where Foster's foreman was waiting and the last 500 packages were unloaded. The first large air shipment of bees had been a success as far as we were concerned.



Loading bees into Cessna for air shipment to Canada. Joe Pencin handing crate to Harry.



A hive hoist makes it easy now to load bees without help.
(Photo by Dr. J. E. Eckert. From "Bees Are My Business.")

But the United Airlines had a different story to tell because they had to spend nearly $1,000 to clean up the plane. Syrup, however, never caused trouble again because on other shipments we used tags instructing the cargo handlers to turn the packages upside down in flight and set them up again after unloading. So we were able to fly many packages of bees to the eastern part of the United States and to Alaska.

To fly over the line into Canada however, it was necessary for the owner of the plane to transport his own shipment. The package-bee business had become prosperous enough by 1948 to allow me to buy a twin-engined Cessna and convert it into a cargo plane. I had to have a co-pilot and found Phil Maxwell, an ex-bomber pilot, to serve in that capacity.

The Cessna was really too small because it could only carry 200 packages even omitting the cans of syrup. However, the Canadian buyer could get a large number of bees for every dollar spent, and this possibility appealed to the Frontier Honey Co. near Edmonton, so 200 packages were given a heavy syrup feed and loaded into the plane.

We had a time getting to Edmonton as the plane had a tendency to swerve to the right on landing and we could not locate the trouble. When we landed there was certainly a tremble in my knees and a bad taste in my mouth.

W. G. LeMaistre, the provincial apiarist, and J. W. Blewett, manager of the Alberta Honey Producers Co-operative, were there to meet us. I almost lost my temper as LeMaistre said "Hold it. We can't accept a shipment like this." He was pointing his flashlight at a package in which there was about seven dead bees on the screen floor. Then Blewett and LeMaistre burst into peals of laughter.

When we got back to Davis, mechanics found that a hydraulic shock absorber was out of adjustment and caused the right swerve which had so nearly resulted in a crash-up. I kept the plane for sometime for delivering packages and it was found that the bees could travel safely by air for a two day flight without syrup provided they were fed before starting and again after reaching their destination. We were able to fly package bees even on the fastest passenger planes and many shipments went this way to the Middle West and were installed on the evening of the same day they left California.

However, one day a United Airline vice-president became so concerned over the possibilities of trouble that an order was issued prohibiting shipments on passenger planes. Packages could be shipped only by cargo plane. However, we still ship bees to any part of the world reached by commercial air lines.

My interest in pollination was now absorbing. George Vansell worked out a plan for the pollination of alfalfa which involved moving a larger number of colonies into a field than usual. These bees at first, because of competition for pollen, would do an effective tripping job but they soon learned this was a painful way to gather pollen and after about a week the bees being familiar with their new surroundings would take longer flights to get pollen from flowers without a tripping mechanism. Then these colonies were moved out and another lot brought in, to go through the same experience with the rotation continuing until most of the blossoms had been pollinated.

The farmers were hesitant to try this plan. I asked Vansell if he would attempt an experiment if I would furnish the bees. He suggested that Stan Good, of Woodland, nearby might be willing to cooperate. Stan was a perfectionist farmer who would carry out every detail. The experiment was set up with Vansell and Luther Jones, Stan Good and myself. I was to get a return only on the yield of seed exceeding 400 pounds to the acre at the rate of 1¢ per colony for each pound up to 750, ⅓ of the seed beyond that. I would have to top this figure before I could hope to gain any more.

Luther Jones supervised spraying, irrigating and dusting. Vansell supervised the bee work and I agreed to put 5 colonies of bees to the acre on 150 acres. I began to haul bees in June, putting them where Vansell wanted them to go. Toward the end of the first week, the bees were not working the alfalfa as they had been so we began moving these bees out and replacing them with others.

At the end of two weeks it became apparent that the bees were not the only limiting factor. They were setting so much seed that the plants could not support them. The plants needed water and Good started irrigating; something rarely done in California. The plants straightened up and began to open new blooms, which the bees tripped eagerly. Again the plants sagged and again they were irrigated.

As the summer wore on the fantastic race between the bees and plants continued. Every moment we could spare was spent on the farm. In September the alfalfa was cut and in 10 days the big harvesters lumbered into the fields to spill out a golden stream of alfalfa seed so the machines became plugged by the heavy load and time and again had to be cleaned out.

Men from the agricultural engineering division of the college decided the machines must be changed. For a week they worked on the machines and the harvesters again started. They could handle the bulk but too much seed was being lost. Another week's delay and, with another lot of changes, the harvesters were ready again. They ate into the windrows handling the heavy bulk without jamming and the golden yellow seeds flowed in an uninterrupted stream into the bins. When all the seed had been cleaned and sacked the yield was nearly 1,000 pounds to the acre, a fabulous crop when you consider the average yield for the state in 1949 was only 220 pounds.

California farmers had been allowing their lands to deteriorate under such crops as tomatoes, sugar beets, and cotton, because they thought they could not afford to follow a normal crop rotation to include legumes. Our experiment proved that nitrogen could be replaced in the soil and the operation made profitable if bees were used to increase the yield of seed. Now many farmers decided to become certified seed-growers and soon the demand for bees exceeded the supply.

My experiments with Vansell and Jones proved the value of bees although it did not answer all the questions concerning their management. I could not experiment very much on land belonging to other farmers but there would be no such restrictions on land I leased myself. Stan Good turned over a lease on 150 acres in 1951 which was planted to common alfalfa, and with the liberal use of bees I set a good crop of seed. The following year I leased more land and planted 50 acres of Certified Ranger and 175 acres of common. Each succeeding year I took over additional leased land to produce more seed. It has become a highly profitable venture. These leased acres contributed to the knowledge of how to use the bees in seed production and they account in part for the growth of our pollination operations which cover several thousand acres of almonds, prunes, pears, trefoil, and alfalfa.

The bees have meant hard work and pleasure and a way of life. I probably will never have a large fortune but as I approach 40 I could retire with a modest income except for the fact that America offers the stimulus of endless opportunities. These three lines of the bee business, honey production, bee breeding, and pollination, have proved to be for me a business equal to any that a young man could engage in.

At one time we had about 4,000 colonies but the only thing we gained from this large number was a lot of extra work. At present, we have just over 2,000 and half of these are leased to other beekeepers. The remaining 1,000 are run by me with the help of my boys and some extra labor. It has been my experience that we have made as much net profit with a lot less work. With fewer bees you can do what should be done when it should be done and still have time for recreation. By working in cooperation with other beekeepers I can still take care of as large a load of orders for packages as I can handle and I can command as many colonies as any grower may want for pollination. In the long run therefore the smaller more efficient and well managed outfit results in equal returns without excessive wear and tear on the operator.

The Sideliner

Efficiency in Absentee Beekeeping

by J. A. Allard

You've heard the old saying that the bee is the only farm animal that works for nothing and boards itself? Well mine do better than that. They help to board *me* by supplying me with the purest, most easily digested, most healthful sweet in existence; and I'm often ashamed of the little bit of time I can devote to caring for them; of the ways in which I am compelled to neglect them.

A half day every week or two is all the time I can devote to my apiary during the honey season. In those few hours I must prevent loss through swarming, supply sufficient room for surplus honey storage, and be on the alert to protect the bees from disease and natural enemies. To do this I have worked out a record system which requires little time and which may be of help to other beekeepers—large or small.

My hives are not in bright sunlight but in the shade of big trees in the woodlot. In examining bees for queen cells, I keep a good flashlight handy. First, I look for cells in the most likely places — the bottoms of the combs in the supers or hive bodies above the first story.

I blow a little smoke in the entrance and under the cover as I lift it. Then I take the first super and set it up on end atop the super or hive body just below it, and with the frame bottoms facing me. Queen cells or cups, if present, will usually be found on the bottom edges of the combs; but if none are there, just as an added precaution, I blow a little smoke between the frames and shine the flashlight up through as the bees scamper to escape the smoke.

Queen cell cups mean nothing unless there is some royal jelly and an egg or larva in them. The empty cell cups may be present at all times.

If I find no cells or cups with larvae or eggs by the bottom inspection of the combs in the top super, I set this super aside and go through the same procedure with the next one and with the third (if there be another); or until I find queen cells —completely built or with eggs or larvae.

When I find the latter condition, I know that this particular colony needs radical treatment if a swarm is to be prevented from running away during my absence. Here is what I do. First I examine the super containing queen cells and select one good, large cell (if possible "ripe" or about to hatch) and destroy the others. I move the old hive and queen to a new location at some distance away, and put a new hive with empty combs or comb foundation in its place. On top of this I place the super with the selected queen cell. The rest of the supers, if any, are placed back on the old hive in its new location. One must be sure the old queen is with the old hive and *not* in the super with the selected queen cell.

The bees at the old location will not swarm because they will have only one queen (after she hatches out), a small amount of brood, but no great stock of honey. With a young queen and an empty brood chamber, they will likely set to work with the vigor of a new swarm.

The old hive and the old queen will suddenly have lost the entire field force which, of course, returns to the old location. Thus its bees will be in no mood to swarm either; but having a large store of sealed brood, will soon be repopulated and able to replace its field workers. In the meantime it will likely have lost its swarming fever.

If I have time, I go over each brood comb in the old hive and cut out all queen cells found as an added preventive of possible later swarming from the old hive. If there is a super in which the bees have just begun to store nectar, I place it on the new hive and add supers at the old location since, with their big field force, these bees will likely need room for surplus honey immediately.

If I am interested in increase more than surplus honey, I may divide the old hive into three or even four, rather than two. All I need be sure of is that each one has a queen cell or queen.

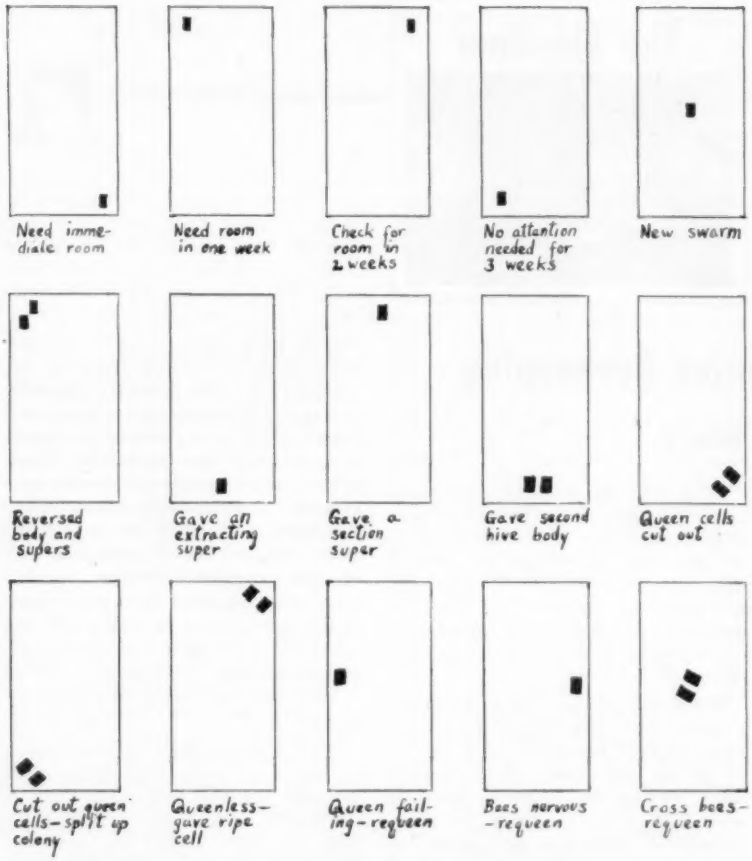
With supers containing brood above the basic hive chamber, quite often you will not find any queen cells in the latter, the bees preferring to build the cells higher up, near the bases of the super combs. This won't hold true, however, in the case of comb honey (section) supers.

For hive records I use about two dozen small, flat pieces of marble chips, each about one inch square. (These happened to be left over from the flat pieces of marble used to make the base of my fireplace). Lacking these, you might substitute small, flat stones.

You should make up a chart like the one shown, at least until you have used the record long enough to remember what each placement means. The only writing necessary with the system is the recording of the inspection date with a pencil on the back of the hive.

If there is a chance of someone's meddling with your hive records, I'd suggest using small metal tags between the super covers and the regular hive covers, where no one would see them.

No one has ever disturbed mine save one man—the state bee inspector who (after informing my wife) presumed it was all right to examine the bees in my absence. He could have



You can devise your own short hand but this is the wai Allard does it.

lifted the covers carefully (as I have to do) without displacing my records; but those little pieces of marble probably indicated nothing to him other than a suspicion that I must be a little "nutty."

I had one good joke on that inspector though. One of my hive bodies was of the old Danzenbaker type which you older beekeepers will recall as having no bee way spaces at the ends of the frames; the frames themselves supported by iron pins, one at each end. Well, that young inspector puzzled over that Danzenbaker frame arrangement for awhile and, after marking the hive for me, left a penciled note with my wife to tell me that I had one of my hives *upside down.*

Pennsylvania

MY BEE GARDEN

by A Virginia Beekeeper

Some eight or ten years ago I felt a great interest in anise hyssop. I ordered some seed but I made the mistake of planting it on soil with too much red clay. I did not get a plant. The next spring I ordered some roots and planted them on high ground that was not too rich; about half of them grew and bloomed. The bees worked them well all day. From these plants, I saved seed and started a bed on lower ground that was very rich. The bees worked the blooms some at this place. Next, I tried it on low ground along a stream. Here the bees worked it very little and some years not at all. So I decided anise hyssop is a good honey plant on high land but not good on bottom land except in a dry year.

Then I tried a package of figwort or Simpson honey plant seed in sandy soil on the bank of a small stream. Every seed came up which made the plants too thick so some of them were transplanted. They started growing after the first rain. I got about seventy-five plants and it was not long before the bees found them. When these plants reached full bloom the bees sounded as if they were swarming. I found that figwort would not grow on any except my best land. If I plant it on rich soil and cultivate it does well for two years and then starts to die out. I think my soil may lack something this plant needs.

My next attempt was with two ounces of golden honey plant seed. This plant likes rich bottom land and is not good on poor soil. After seeing this plant I found thousands of the same kind growing along a large river where I have two bee yards. Some years I get some honey from these plants and some years none. The honey is a golden color, different from any other honey and it has a fair flavor.

Mountain mint was my next try. This plant is by far the best for poor or thin soil. It will grow on rich bottom land, dry high land or on poor hillsides. It has grown everywhere I have planted it. The bees always work it well. Mountain mint seed grows on the flat top of the plant which makes it easier to gather by hand. The seeds are small enough to go through a screen wire sifter. This plant blooms after all the clovers are gone.

Other good honey plants are summer sage and wild marjoram. I have planted Pellett clover several times but cannot seem to raise it as it does not grow well on my soil and the rabbits like it so well they will not let it get a start.

A small patch of figwort or mountain mint would not be much good to the man who counts his hives by the thousand, hauls them hundreds of miles and measures his honey crop by the carload. But the man with one hundred hives or less can help his bees by planting something that will bloom when there is nothing else for the bees to work. Seed can be obtained from many kinds of honey plants from Pellett Gardens, Atlantic, Iowa. I have found them fair in all my dealings with them. If you have the time and land, why not plant a bee garden? It is a lot of fun and you may find a wonderful honey plant for your bees.

Firemen ready to help Lee Fowler cut down a comb from 50 foot maple tree.

The rock battered combs had lost many bees because of the cold. The honey was estimated at about 25 pounds.

CALL OUT THE FIRE DEPARTMENT!

by Irene Scott

In the past a bee tree has usually been considered a hollow tree in which honey bees have holed up. They were the boon of bears and food foragers. Then, there were the honeydew trees so called because of the sticky, sugary liquid appearing on their leaves. This bleeding (honeydew) resulted from sap pressure, caused by hot weather and high atmospheric humidity. The honey produced from honeydew is dark and generally undesirable. The basswood is often called a bee tree, too, because its blooms are rich in nectar.

But the bee trees that Lee Fowler is called upon by the police to "debee" are ordinary trees. Lee, a professional beekeeper, lives at 2735 East Bates Avenue, Englewood (a Denver suburb) Colo. He's an old hand at aiding the police in removing swarms from public parks, parkways, civic buildings, and other public properties. Lee is assisted on these distress calls by the police, who block or direct traffic around the usually angered bees. The fire department uses ladders and ropes, when the bees are in a high place. And the press, with a photographer or two, makes a beeline to such events.

There's a lot of bee lore heard at such a time, and one theory that always comes up is the old one about bees not being able to sting while a person holds his breath, clenches his fists tightly, or grasps one wrist firmly with the free hand. Lee thinks this fable probably originated because a person holding his breath would be quiet. But for the die-hards, the U.S. Bureau of Entomology reports: The stinger of a bee does enter the skin through the pores, and these tiny openings may be slightly affected by breathing, but the difference is not sufficient to interfere with the operation of a bee's stinger. Lee thinks it is true, however, that bees are repelled by certain body odors, which may be one reason why some people do not excite or anger bees while others do.

Another myth Lee is always hearing from sidewalk superintendents (when they venture within earshot) is that bees "know" a beekeeper. Lee reminds them that it's the other way round, beemen know bees.

Lee was called upon to remove displaced bees on the average of once every six days in '54. This was an all-time high. And Lee thinks it was due to the general drouth in this area. Not all took to the trees, but enough did to give bee trees a new connotation.

Incidentally, there's a Bee Line Highway between Canon City, Colorado and Kansas City, Missouri—the shortest route between these two cities.

The Highest Known Flight of the Bee?

From time to time we read of reports and observations in various publications and periodicals concerning the height that bees may attain during flight. Just recently I came across such an item.

It was while I was reading an account of Colonel John C. Fremont's Journal of his first expedition in the high Rockies that I came upon this particular item.

On August 15, 1842, Fremont and his party had just ascended one of the highest peaks of the Rocky Mountains on the Continental Divide. The men were sitting down on a large rock, resting after a very tiresome climb, and marveling at the scenery about them when a solitary bee came winging from the east and lit upon the knee of one of the men.

To say the least, the entire party was much surprised as they had believed that they were beyond the region of any animated life for they had encountered nothing alive except a small sparrow-like bird early in their ascent that day.

Fremont commented that it was a very strange place to encounter such an insect, here on one of the highest peaks of the Rockies, whose elevation was 13,750 feet above the Gulf of Mexico, and where there was nothing but rock, snow and ice.

Immediately after the bee had alighted it was seized and put between the pages of a large book in which there were flowers collected while on the journey. Colonel Fremont thought it might have been a little cruel to end the bee's life but said they only carried out the law of this country where all animated nature seems at war, and that they had at least put it in a fitting place, among the flowers it had loved.

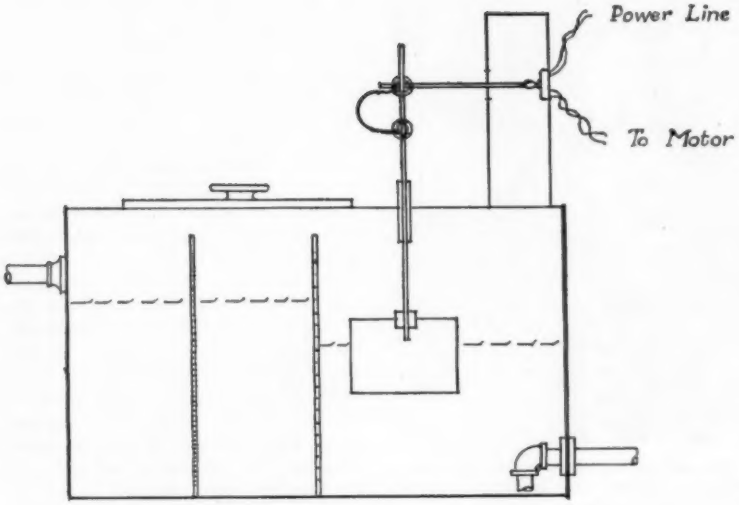
—Marvin W. Kosanke, Ripon, Wisconsin.

Rendering Wax from Dark Combs

A small quantity of dark comb can be rendered in an enameled water pail and the bottom half of an old aluminum kettle. Punch holes in the kettle bottom about three fourths inch apart, using a spike to make the holes.

Bring the comb to a boil in the water pail using considerable water. Push the aluminum kettle upside down into the pail, using a dipper or something to hold it down and keep boiling. Then let it cool. It gives fairly clean wax.

John L. Dankers
Wisconsin



An Automatic Pump Control and Strainer for the Small Operator

by John Blietz

Since early high school years, or for more than twenty years in my experiences as a back-lotter and more recently side-line beekeeper, I have felt the need for a satisfactory means of conveying honey from the extractor to the market container. For years I elevated the extractor up on a bench and made use of the gravity and lift method. I have even used a home made sump strainer on the bench with a spigot and a five gallon honey can below the bench.

Upon inquiry of established beekeepers as to the feasibility of using automatic controls and pump, the usual answer was: "It is okay if everything is working just right; otherwise you will have trouble." I have since found this to be a pessimistic attitude, or at least an exaggeration. Even some literature seems overly cautious on the subject of honey pumps and controls. I believe if a pump is geared down reasonably so that bubbles cannot be observed in the honey, and particularly when an automatic control is used, there need be absolutely no fear in the use of such equipment.

Because, primarily, of this cautiousness and as my extracting space is very small, I attempted to construct an automatic pump control and strainer tank from a 60 pound honey can and other scrap materials. I used this sump and control tank last year with very satisfactory results.

The control is built around an ordinary single-pole, single-throw, industrial-type toggle switch mounted in a tubular tin housing extending some eight inches above the top of the tank and wired in parallel with the motor power cord. Leverage is given the switch by soldering a straightened hive staple to it and soldering a washer at the other end of the staple. The float is a one pound coffee can. A hole drilled through the top of the strainer can with a soldered in sleeve receives the shaft and float. A washer, soldered two inches from top of the shaft, acts as a catch which trips the motor or toggle switch when honey reaches a high level in the can. The motor then starts and the honey is pumped out of the can and when the float reaches a low level, the cord attached to each of the washers pulls the lever down and again trips the motor switch causing the pump to stop.

I use two straining meshes; one is a coarse wire screen and the second is a heavy tin sheet perforated with seven penny nail holes which permits rapid straining through of honey.

The honey can lies sidewise. A square opening in the top the width of the can and fitted with a tin cover and handle, and the whole painted aluminum, completes the unit. Pipe fittings are conventional. This tank should work well with any but the very largest extractors.

The Demaree Method Made Easy

Just before fruit bloom, reverse the two hive bodies and add two deep supers or three shallow supers. Remove entrance blocks. This provides ample room and prevents swarming.

Just before the main honeyflow place the two brood bodies on the top and the supers underneath. Check every week. When the queen is found in the top hive body place this body and the one under it on the bottom board, put on the excluder, and put all the supers above it. There will be no need to check the supers for swarm cells as they will contain only sealed brood.

Continue to super on top during the flow. This method is quick and easy and it assures the development of strong colonies to gather a full crop of honey.

Julius Lysne
Wisconsin

One Way To Save A Diseased Colony

by Robert M. Mead

Sometimes in inspecting for AFB we find a colony with a lot of the brood infected but that still has a good population of adult bees. Some inspectors and some beekeepers burn these immediately and so do I under some circumstances yet these bees can be saved if one will follow a simple plan to the letter and do every step of the work carefully so as not to spread the disease. Bad infection has been cleaned up by simply feeding sulfa but this plan gets rid of the diseased material at once and if correctly followed the disease cannot possibly be transmitted.

Screen an empty standard hive body top and bottom with the top screen on a frame so it can be easily put on or taken off as desired. Go to the diseased colony towards evening on a cool day and quietly as possible shake the bees and queen into the empty hive body and screen them in. Destroy the diseased combs but save the covers, bottoms and empty bodies to be scorched out if desired. Scorching diseased equipment should never be done unless one is willing to do a very particular job.

Take the screened hive body containing the bees and queen and place in a cool dark place such as your cellar. Do not feed for 24 to 36 hours and then feed by brushing screen with thick syrup containing recommended doses of sulfa. Feed the

medicated syrup, just what will brush on the screen easily, not enough to mess up the bees, for three days. At the end of three days hive these bees on clean combs and they will build up much in the manner of a package of bees.

I have tried this several times, using bees from very badly infected colonies as a test, and the disease has never recurred. I do not believe that it is possible to transmit disease in this manner if every step is done carefully. When rehived they should not, of course, be returned to a diseased yard or put in any other location where they might pick up the disease again from outside.

Whether this is worthwhile or not depends entirely on circumstances. I would not consider it worthwhile unless the diseased colony to be treated had four or five pounds of bees and unless it could be done early in the season so that they would have ample time to reestablish themselves and make some honey.

There is nothing original about this. It is simply what I consider an improved version of the old shaking method that was used years ago.

Vermont

Smoking Bees with Puff Balls

To keep the fire going in your smoker, try puff balls instead of saltpeter. Use them on the live coals. We used puff balls fifty years ago. They work.

John L. Dankers
Wisconsin

"Starting Right with Bees." Price Correction

In May, page 194, an announcement is made of the revision of "Starting Right with Bees," stating that copies may be obtained from the American Bee Journal or from Gleanings for 75c. This is an error. This new 11th edition sells for 95c. Please take note.

South and East

Readers of "Sideliner" are generous with items from experience and with suggestions and we are glad that this section of our Threeway magazine is proving to be so popular. However those of you who are in the east and the south, please do send in your material. Too few from these areas contribute. So "take your pen in hand" and help your fellow bee men in the east and south.

LEE REENTS AND HIS HUNDRED SCOUTS

Lee Reents, whose wife Elsie was Nebraska's Honey Queen (April), at Lincoln, gave talks to over a hundred Cub Scouts, using miniature hives, pictures and live bees. The boys were most interested in the bees in the observation hive and in the equipment in the honey house. All boys and adults were given samples of honey. In addition to the boys there were twenty five adults. There were eight different groups. For Tricks-Or-Treats, Lee gave all the cubs honey pop corn balls. Teach the kids and maybe when they have homes honey will be on the table.

THIS SWARM MOVED IN

This swarm of bees came to our home apiary and lighted on the top of a hive that was already occupied. The bees were about four inches thick all over the hive and very easy to run into an empty one. I have a friend, Carl Backus, interested in photography and I think his picture gives a good idea of a really exceptional swarm. Our home yard is on a hill and many swarms come there from other places. It was a job hiving this swarm, mostly on foundation. Within a week the foundation was drawn and additional supers were given until a step ladder was used to reach the top. It goes to show that in numbers there is strength.

Ralph O. Klebes
Illinois

Beekeeping For The Beginner

Removal and Care of the Honey Comb

by W. W. Clarke, Jr.

Extension Apiarist

Pennsylvania State University

Honey as it is produced by the bees is a fine food with many different flavors, depending upon the source of nectar; almost all of the flavors are enjoyed by someone. Honey has been called "the nectar of the Gods" but man, in his processing, has not always helped the quality of his product. When a good crop of honey has been produced it would be a shame not to harvest and care for it properly. Make all steps in your beekeeping as simple as possible to retain the flavor and quality of honey.

As a general rule, the beginner should rely on the bee escape to get the bees out of the full super. The bee escape is nothing more than a trap made with two spring wires which will allow the bees to get out of the super, but not in. If, late in the afternoon, a bee escape is placed in the hole in the inner cover, with the inner cover placed under the super to be removed most of the bees should be out of the super by the next morning.

There are three conditions which may keep bees in the super; First, brood in the super (the bees will not desert brood); second, clogged bee escapes, (drone or bee may clog the escape or it may have been propolized); and third, faulty bee escapes. Always check before setting the bee escape in place to be sure that it is clean and the springs are in their proper places. Best results are observed when not more than two supers are placed over an escape at one time. Cover the supers with a cardboard or another inner cover in case the lid may be warped. Check for cracks or upper entrances to see they are all closed. If there is an opening, even a small one, the bees will rob the super in a very short time. Masking tape does a good job at closing small holes or cracks.

Many beekeepers, who are in a hurry, use the shaking method to remove the bees from the supers. In this method each frame is taken out and given a jar between the thumb and fingers. The remaining bees are swept off with a handful of grass or soft brush. As the combs are freed of bees, they are placed in an empty super.

The simple extracting outfit given in the reading at the right.

These two methods are probably the only ones which should be attempted by the beginner, and the bee escape is preferable. Comb honey should always be removed by use of a bee escape. Never smoke bees out of a super. This makes the bees chew the cappings and may also give the honey an off-flavor. The acid board method, used by many commercial beekeepers, should not be used by the beginner.

Extracting is a very simple process; the minimum equipment is inexpensive and with proper care it will last indefinitely. The extracting outfit should include the following:

A sharp knife—the regular cold uncapping knife is fine, if it is sharp.

An uncapping tub with a hardware cloth bottom to drain the cappings. There should be an outlet on the bottom to drain the honey.

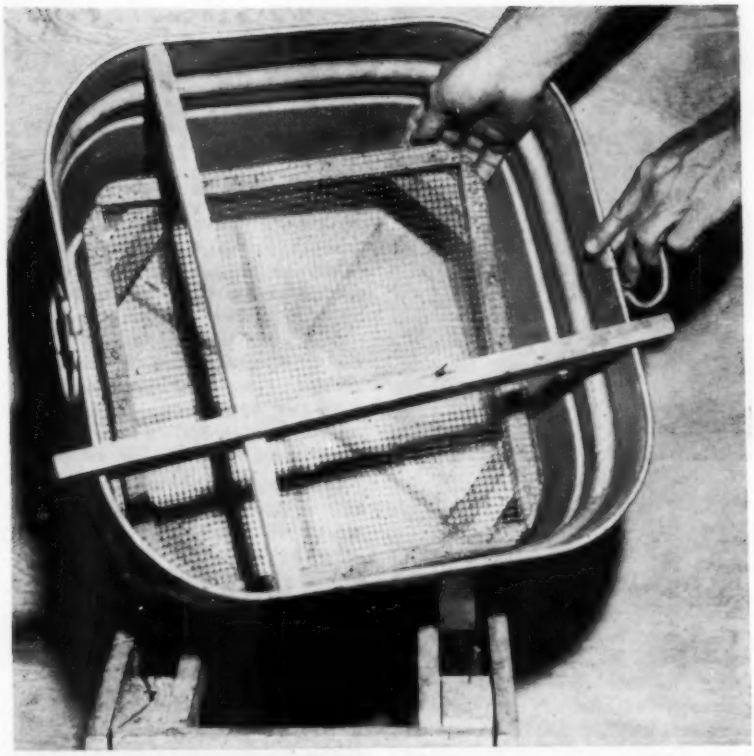
An extractor.

A settling tank with a honey gate at the bottom.

Several buckets.

A supply of water, and a cloth or sponge.

Use a sawing motion to cut the cappings off the comb of honey into the uncapping tub and then place the frame in the extractor. The hardware cloth bottom in the tub will hold the wax and drain the excess honey into the tub to be caught in one of the buckets. After the honey has been extracted from all the combs, the drained cappings may be spun in the extractor and the wax melted in



Uncapping tub, with screen bottom and comb rest.

Use the bee escape to remove the honey from the hive. Be sure bees can not find their way into the honey super from outside.

a solar extractor or a double boiler arrangement.

When the extractor is full of combs, set it in motion, slowly removing part of the honey from one side; reverse the frames, remove all the honey from the other side; reverse again, and finish the first side. If the first side is rotated too fast, the pressure from the full side will break the comb.

The honey is allowed to run from the extractor into another of the the buckets; it is then poured through a strainer into the settling tank. The strainer may be several layers of cheesecloth or a fine cloth or wire. The honey should remain in the settling tank for about a day to allow foam and small particles of wax or dust to come to the surface. The honey is then bottled from the bottom of the settling tank.

A supply of water, even a bucketful, and a sponge or cloth will keep the place from getting messy, if a little is used every time there is a drop on the floor. Hands should be washed frequently. It surely makes a mess, if the honey and wax are spilled and tracked through the house. Some beekeepers will cover the floor with a heavy paper; at least one man uses a damp burlap bag where he walks and this is a big help.

Good quality honey can be prepared without a lot of equipment. A settling tank, into which the extracted honey is strained (a piece of fine cloth or several layers of cheesecloth) and allowed to settle, is sufficient. No heating is necessary as long as it is free of crystals and warm enough to pass through the strainer. Best results are found when the supers are stacked in a very warm room overnight or when the honey is extracted just as soon as it is removed from the bees. The honey will settle better if it is warm. The honey may be bottled directly from the settling tank. If it should crystallize before it is needed, it may be liquefied by heating in a water bath. Place the bottled honey in a water bath until the temperature of the honey is about 140°F. Repeated heatings and high temperatures will change the color and flavor of honey.

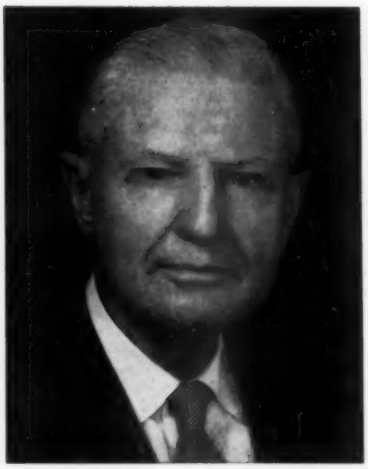
Comb honey should be removed as soon as the sections are full. The supers should be stacked on a level floor in an airtight pile and fumigated immediately after they are removed from the beehives and again in 8 to 10 days. Carbon disulfide is usually used as a fumigant. Place a dish containing about one-third ounce of carbon disulfide for each super in an empty super on top of the stack and cover the stack. Carbon disulfide is dangerous to use since it will explode if there are sparks or open flame. The treatment should be done in the open or in an outbuilding, away from open flames or sparks. After fumigating the sections should be scraped clean and graded. No dirty, damaged, or unfilled section should reach the open market as comb honey. Wrap in cellophane or place in windowed cartons ready for the market. Store comb honey away from mice and in a dry, warm room (temperature above 70°F), to prevent granulation.

Easy Relocation for Swarm Control

Ben Knutson of Colorado uses a rubber tired hand truck to hook under the whole hive and with this pushes the colony that may have swarm cells to the back of the yard and on its previous stand places a new hive with a young laying queen. He tries to make the new hive look like the old one. The bees go in without much hesitation. He does not cut the swarm cells. This plan is wonderful for the commercial producer as he does not have to look for cells or queens nor does he have to do any checking. This automatically separates the old queen and the field bees. During a honey flow the bees will rarely kill the young queen on the old stand.

Honey and Cancer Series

No. 3 **by C. Jarvis, M.D.**



Our pioneer ancestors in Vermont learned early the fundamentals of nature as they cleared the land to establish a farm and grow the crops they needed. These fundamentals have been passed by word of mouth by one generation to the succeeding generation. They not only apply when tilling the soil but also represent the fundamentals of Vermont folk medicine. Our pioneer ancestors reasoned that nature did not have one set of fundamentals for plants, bushes and trees, another set for insects, fowl and animals and still another set for human beings but had one set of fundamentals that applied to all three. In order to come to a conclusion regarding the benefits derived from any remedy it was necessary for it to fit in with nature's fundamentals. In establishing Vermont folk medicine a problem in multiple correlation between plants, fowl, animals and human beings was constantly done. If an observation was made when tilling the land this observation must also apply when dealing with animals and human beings. If adding potassium to the soil brought about less trouble to plants from harmful insects then potassium should cause lice and worms to leave a cow's body and lice and worms also to leave the human body.

The fundamentals of nature are ages old and have stood the test of time. They may be listed as follows: In order to turn seed time into harvest there must be suitable soil, suitable preparation of the soil, seed of sufficient germinating power or root of sufficient strength, a certain amount of moisture, a certain amount of heat and the soil at rest after preparation and planting.

Vermont folk medicine in applying these fundamentals believes that in order to turn health into sickness, such as cancer represents, there must first be suitable soil represented by body tissues and suitable preparation of this soil by not accepting nature's plan for a way of life but instead, rearranging it in accordance with the desires of the individual. Suitable soil is determined by the food eaten, the liquid drank and the air breathed by the mother during pregnancy. In this way she determines the body physiology and body chemistry she will carry across the human bridge to the infant to be born later. If she wishes she can by following nature's plan of eating give birth to an infant that is perfectly adjusted to the world which it enters. By disregarding nature's plan of eating she can bring into this world an infant that is poorly adjusted to the environment into which it comes. Nature has a law that requires an animal or human being to adjust inself to its environment or be destroyed. If the adjustment is only partially made then the individual faces a life of poor health with time frequently taken out to recover from sickness that would not have appeared if the adjustment to environment was complete. The start given the infant is most important in the prevention of cancer.

The individual who wishes to avoid the appearance of cancer needs to keep in mind these fundamentals of nature his whole life long. He needs to ever keep in mind that a high carbohydrate low protein daily food intake has been provided by nature for him which means he will emphasize fruits, berries, edible leaves and edible roots in his daily food intake. He will try to eat the food the changing seasons offer changing his daily food intake as the seasons change. Because the composition of the human body is a mineral one he will avoid refined foods such as white flour and white sugar which have the needed minerals removed. In the garden we learn the need of the root vegetable for potassium if they are to grow as they should. In the human body we learn the need of potassium in order that the body cells may enjoy good health. For the needed potassium we turn to honey. Here the potassium is in an acid medium and is associated with trace minerals which the body needs to maintain various body processes as they should be carried on.

New Mexican Bee Book

Arturo Wulfrath and Dr. Juan Joaquin Speck, those ten thousand colony beekeepers of Mexico (whose operations were recently written up by R. B. Willson in Gleanings in Bee Culture) are the authors of the first volume of a two-volume work on bees entitled "Encyclopedia Apicola." This work first appeared in serial sections but has been assembled in a 450-page paperbound book.

The book is well written, in fact authoritative, and promises to help greatly in modernizing and greatly expanding honey production throughout Mexico. This first volume begins with installation of the colony, and continues through queen rearing, hive manipulation, colony management, swarming, transferring, feeding and so forth.

We assume the second volume, when issued, will include extracting, honey flora, preparation for market and so forth.

The book is available at a price of $3.50 by addressing the distributors, the magazine TIERRA at Donato Guerra 1 Desp. 106, Mexico City 1, Mexico.

More On Royal Jelly

After the fine articles by R. B. Willson in the American Bee Journal a year ago, followed by excerpts from time to time from foreign sources, we have made little mention of royal jelly in our columns. Be not deceived into assuming that we have abandoned the possibilities of further material on this far from dead subject.

Thorough scientific investigations on royal jelly are being conducted in several well known laboratories towards the end that we may have either exploded or generally corroborated the claims for the value of this product of the hive in human ailments.

Such investigations take time. So far as the experiments have gone, we understand, they are far from totally discouraging. We hope that not too long a time will elapse before some of the tests will have been concluded.

Traveling With The Lovels

After a fast trip across New York State on the newly completed "Through Way," we spent the night in a state park in the Adirondack Mountains next to two car loads of Gypsies. The next day we crossed Lake Champlain on a ferryboat and had driven only a few miles in Vermont, when we came to an attractive roadside building called the "Maple-Honey Bowl." Back of the stand there was a well kept apiary of over 30 colonies. Lee Faneuf, a retired electrician, now devotes his entire time to beekeeping and proved an interesting source of information. In spite of the cold climate of Northern New England, he is able to winter his colonies by merely wrapping tar paper around them. His honey comes chiefly from clover, basswood, and button-bush, and he sells it all at good prices from his stand. He also stocks another native product, the famous Vermont maple sugar. He described the honey from button-bush as light colored and mild with a good flavor. When Mr. Faneuf learned our names, he exclaimed "I have just been reading about your travels in the AMERICAN BEE JOURNAL."

We continued on to Middlebury and arrived just in time to catch Mr. and Mrs. Charles Mraz as they were leaving for New York City. They are a most attractive couple and could easily pass for bankers or industrialists. They cheerfully delayed their trip several hours to show us around. With 900 colonies, Charles Mraz is one of the largest New England beekeepers and devotes his entire time to this profession. Although he sells entirely wholesale, he receives much higher prices by packaging his honey in various sizes of jars. The Mrazes took us to their large honey-packing establishment which contains several kinds of machinery to simplify their work. They seed a portion of their extracted honey with crystals and have built up a good demand for crystallized honey. Mr. Mraz does not use pressure filters nor does he heat his honey to high temperatures, because he finds that both operations hurt the flavor. He gently warms some of it to facilitate pouring and to delay crystallizing.

Charles has developed many individual techinques which increase both the amount of honey and the efficiency of operation. For example, he puts only 8 frames in those supers used for extraction. The bees draw out the combs and fill the extra space giving very deep cells. With only 8 frames there is less work in handling, less frames to buy, and less foundation to be used. He also uses combs drawn out in supers for brood frames, because they are better made and have less drone cells. He makes his frames with the bottom piece the same width as the top bar and uses metal separators.

Phil Townsend with samples of honey packed by him at Lebanon, New Hampshire.

Button-bush or Button-willow (Cephalanthus occidentalis). The source of a light, mild honey.

In front of his honey house there were blooming both the broad-leaved and the narrow leaved bird's-foot trefoil. He is excited about this legume because of its importance to agriculture and because it has beagriculture and because it has become an important honey plant in Vermont. Well laden with samples of honey we regretfully left the Mrazes and continued eastward.

That night we camped in a beautiful state park in the Green Mountains by a clear stream tinkling over the stones. The cool mountain air, fragrant with spruce and hemlock, was a welcome change from the stifling August heat of the lowlands to the south.

The next day we stopped at the home of Phil Townsend, Lebanon, New Hampshire, one of the best known beekeepers in the area. He told us that he kept bees also in Vermont and New York and found that when the crop failed on one side of the Green Mountains, it often was excellent on the other side. We found him dressed only in shorts and he laughingly explained that he usually worked his bees dressed in shorts and a veil and although he knew it looked crazy as all get-out, it was comfortable and kept the bees out of his face. His attractive honey stand has been in use over 30 years and he features several kinds of containers including a two-quart dripless pourer, chunk honey, and crystallized honey. Tiny chunks of comb were also sold in special containers, 2½ ounces for twenty-five cents. Sections brought high prices, and were sold by the ounce, each one being weighed separately.

One side of Mr. Townsend's home opens up and he backs his truck right into the house to load and unload. He has a well-equipped basement for extracting and packaging his honey. His far-flung system of apiaries brings in a variety of honeys. In New York he harvests purple loosestrife honey, in mountain yards in Vermont he obtains wild raspberry honey, and in swamps near Middlebury, he also obtains button bush honey and of course the old standby clover honey.

—Harvey and Ethel Lovell, Louisville.

History Of American Beekeeping Federation Auxiliary

by Mrs. Newman I. Lyle, Vice President

PART I

The National Auxiliary of the American Honey Institute was organized in San Antonio, Texas, November 23, 1936, at the David Crockett Hotel. Mrs. H. M. (Ethel) Krebs, Sacramento, California, was elected the first President and Mrs. Florence Bennett, Birkenfield, Oregon, Secretary-Treasurer. Approximately 80 ladies were in attendance, all expressing a desire to organize a Ladies Auxiliary, the purpose of which would be to plan and build programs of special interest to the ladies attending the National Conventions.

Mrs. Malitta F. Jensen, of the American Honey Institute, explained the Auxiliary development as sponsored by the Institute. The National Auxiliary organization was started in 1929 but the first State Auxiliary was not organized until 1930 in Illinois, with California second.

Early in 1936 the Institute representatives had organized Auxiliaries in Illinois, California, Iowa, Wisconsin, Washington, Oregon, Idaho, Utah, Michigan and New York with a chairman and secretary in each. The ladies became more interested, made a greater effort to attend the meetings, took part in the discussions and went home better informed and taught others how to use honey in the home. It was voted to hold open the privilege of becoming a charter member until the 1937 convention in Washington, D. C. The dues were 25 cents. Twenty-nine ladies from 17 states and Canada joined. These were California, Iowa, Missouri, Oregon, Texas, Florida, Louisiana, Montana, South Dakota, Illinois, Michigan, Nebraska, Wyoming, Indiana, Minnesota, North Dakota and Wisconsin. The National Honey Cookery Contest was held with 268 entries from 22 states; Wisconsin with 30, Illinois 27, California 19, Michigan 15, and Texas with 14 entries.

The second National Convention was in Washington, D. C. October 25 to 27, 1937, at the Hotel Washington. In the absence of Mrs. Krebs, Mrs. Malitta Jensen served as chairman. Forty-five ladies were present and 30 joined the Auxiliary. Mrs. Irene Duax, Chicago, Illinois, was elected President and Mrs. W. E. Becker, Detroit, Michigan, Secretary-Treasurer. Mrs. George Bohne, Luling, Louisiana, Mrs. H. B. Short, Hayneville, Alabama, and Mrs. Virginia House, Dunedin, Florida were selected as Vice-Presidents to help with local arrangement for the 1938 Convention. Another Cookery Contest was a part of the meeting. The membership by July, 1937, had increased to 110, representing 20 states and a Canadian Province.

The third meeting of the Auxiliary was in New Orleans, Louisiana, at the Roosevelt Hotel, December 5 to 7, 1938. Mrs. Irene Duax, Chicago, Illinois, was re-elected President and Mrs. Arthur Schultz, Ripon, Wisconsin, Secretary-Treasurer. A National Honey Cookery Contest was held, with each contestant sending in her favorite menu or recipe or both.

Mrs. Ethel Krebs, Fair Oaks, Cal., 1st Pres. of National Auxiliary of American Honey Institute, San Antonio, 1936.

Mrs. Irene Duax, Chicago, elected President in Washington, D. C., in 1937 and in New Orleans in 1938.

Mrs. T. W. Burleson, Waxahatchie, Texas, elected President in Sacramento in 1939 and in Omaha in 1940.

Mrs. E. H. Bremer, San Antonio, Texas, elected President in Niagara Falls in 1941.

Mrs. Millard Coggshall, Mineola, Florida, and Groton, N.Y., acting President in 1943.

$200.00 in cash and other valuable prizes were given away.

Sacramento, California, was the fourth Convention city on November 7 to 10, 1939, in the Native Son's Hall. At this time the name was changed to "National Auxiliary of American Honey Industry." A new constitution was adopted and printed in "Honey Cookery News" and a copy mailed to each member. Mrs. T. W. Burleson, Waxahachie, Texas, was elected President and Mrs. E. H. Bremer, San Antonio, Texas, Secretary-Treasurer.

In Omaha, Nebraska, October 22 and 24, 1940, the fifth annual meeting was held in the Paxton Hotel. The constitution was again rewritten and adopted, changing the name to the "National Beekeepers Auxiliary." The constitution stated that the purpose of the National Auxiliary was for the promotion and encouragement of beekeeping with special emphasis on the use of honey in the home. The officers were re-elected.

Mrs. E. H. Bremer, San Antonio, Texas, was elected President and Mrs. Millard Coggshall, Groton, New York, and Minneola, Florida, Vice-President, and Mrs. Barbara Kirchbaum, McGregor, Iowa, Secretary-Treasurer, at the Niagara Hotel in Niagara, New York on November 12 to 14, 1941.

A meeting was not held in 1942 due to the war and failure of the American Honey Producers' League. A meeting was called in Chicago, Illinois, at the Morrison Hotel, January 24 to 27, 1943, of representatives of all segments of the beekeeping industry forming the new organization "National Federation of State Beekeepers Association."

In the spring of 1943 both Mrs. Bremer and Mrs. Kirchbaum resigned. Mrs. Coggshall, the Vice-President, finished out the term and appointed Mrs. Reva Todd, Des Moines, Iowa, Secretary-Treasurer.

Alfalfa Bulletin

The College of Agriculture of the University of Illinois has just issued a 20 page Circular (No. 756) on Alfalfa in Illinois; its varieties, seeding, growth and harvesting.

Seifert Sentenced

David Foreman of the Division of Markets of the State of Illinois advises that Matthew Seifert of Seifert & Mann, Chicago, has been sentenced to 60 days in jail on charges of embezzlement, besides court costs. Similar charges await him in Livingston County.

Canadian Progress Report

Progress report (1949-53) of the Apiculture Division of Dominion Experimental Farm at Ottawa, Ontario, covers the following subjects:

Pollination Studies on Red Clover and Alfalfa; Honeybees and Orchard Sprays; Effect of Herbicides on Honeybees; Breakdown of Texture of Re-crystallized honey; Prevention of Crystal Development in Packing Liquid Honey; Stack Heating of Packed Honey; Flow Rates and Viscocity of Honey; Equipment for Processing Honey; Pasteurization by Irradiation; Sterilization of Contaminated Combs by Irradiation-Possible but not economically feasible; Bee Disease; Carbon Dioxide Anesthesia.

We assume that copies of this report may be obtained from the above address.

Paul L. Holcombe Retires

After more than twenty years of service as Inspector of Apiaries for New Jersey, Paul L. Holcombe has retired. As a fitting climax the beekeepers of New Jersey tendered Mr. Holcombe a banquet on April 27 at which they presented him with a citation for "Distinguished Service to the Beekeepers of New Jersey". His has been an outstanding part in the betterment of beekeeping of his State.

After talks by the representatives of various branch associations and the College of Agriculture, a scroll was presented by Fred Coddington and gifts by Robert S. Filmer.

Jack Mathenius of Phillipsburg, Mr. Holcombe's assistant for a number of years, will act as Chief Inspector until official action on Mr. Holcombe's successor is taken.

Paul will operate his hundred colonies of bees, most of them for producing extracted honey, some for pollinating holly in a large commercial planting. He also plans to propagate various species of both American and European holly.

Learn and Mix in '56

Scene on the campus of the University of Rhode Island.

Eastern Apicultural Society
First Annual Meeting
University of Rhode Island,
Kingston, R. I.
July 13 — 15

Friday, July 13, 1956

10:00 A. M. Call to order; Invocation; Welcome to R. I. State Officials; Welcome to University of R. I., President Carl Woodward; President's Address: J. Gaston Levitre; Keynote Speech: Jas. I. Hambleton, Head, Beekeeping and Insect Pathology Section, Beltsville, Md.;"Chinese Evodia Honey Tree" Fred Schwoebel, Curator Langstroth Arboretum, Philadelphia, Penn.; "Nosema and Its Control", Dr Howard E. Cmejla, Parasitologist, Abbott Laboratories, Chicago, Ill.

1:30 P.M. "The Law Pertaining to The Honeybee", Mr. A. K. Blanchard, prominent lawyer and successful beekeeper, Aldie, Virginia.

2:00 P.M. Panel Discussion: "Problems of the Suburban Beekeeper", Robert Greiling, Long Island, N. Y., Moderator: Al Babtiste, Concord, Mass.; Edgar Blake, Woodbridge, Conn.; Milton Stricker, Annandale, N. J.

2:30 P.M. "Beekeepers As I Know Them", Prof. George Abrams, Apiculturist, Apiculture Department, University of Maryland, College Park, Maryland.

3:00 P.M. "Productive Queens", Charles Mraz, Middlebury, Vermont.

3:30 P.M. "Colony Morale", Prof. Edwin J. Anderson, Apiculturist, Department of Zoology & Entomology, Pennsylvania State University.

4:00 P.M. Advance Subjects: Wax rendering, etc., John Buchanan, Sales Manager, A. I. Root Company, Medina, Ohio.

7:30 P.M. Square and modern dancing, to 11:00 P.M.

Saturday, July 14

8:00 A.M. Special groups breakfast meeting. Francis Gravely, Chairman—Supplies; William Clark, Chairman—Extension; Paul Holcomb, Chairman—Apiary Inspectors.

9:30 A.M. Reports of special groups, supplies, extension, and inspection. "Uses of Honey in Cooking", U. R. I. Home Economist. Outdoor activities in bee yard, under direction of William Clark, Extension Apiarist, Pennsylvania State University, Prof. Edwin J. Anderson, Prof. George Abrams. 4-H Program: Thomas Hines, Kentucky 4-H State Beekeeping Champion, Morgantown, Kentucky.

1:30 P.M. "Biochemistry of the Honeybee", Dr. Calvin Lang, Conn. Agricultural Research Station.

2:00 P.M. "Lets Talk About Honey Plants", Prof. Harvey B. Lovell, Department of Biology, Louisville, Kentucky.

2:30 P.M. Panel Discussion: "Bees and Flowers", Reverend Carl Webb, Glastonbury, Connecticut. *Bees*: Dr. Mary I. Bunting, PhD, Chairman, Dean of Douglas College, Rutgers, the State University of New Jersey, Beekeeper and Microbiologist teacher. Mrs. Louise Yates, Hartford, Conn., Beekeeper, Lecturer, World Traveler. *Flowers*: Mrs. Allan Davenport, Jamestown, R. I., Federated Garden Clubs. Mrs. Adelina G. Simmons,

Coventry, Conn. Federated Garden Clubs.

3:45 P.M. Tea—by the ladies.

4:00 P.M. Business Meeting.

8:00 P.M. Banquet: Speaker, Commander Alfred G. Brown, Atlantic Reserve Fleet; Roy Stadel's "Waltzing Doll"; Von Frisch's original film "Behavior of the Honey Bees".

Sunday, July 15

Forenoon: Church Services; Tour of University Campus.

Exhibits: Gadget Exhibits, Alymer Jones, Malden, Mass. Chairman. All the Ben Franklins of the Bee World are invited to bring along their pet gadget for display.

Approximate Cost (Rooms: husband and wife accommodations)

Registration	$ 3.00
Room: Friday and Saturday	4.00
Banquet Ticket	$2.05
	$ 9.05

Meals less than a dollar per. Suppose—3 meals Friday, 2 meals Saturday, and 2 meals Sunday.

Total of meals max.	$ 7.00
	$16.05
Add $2.00 if you register Thursday	2.00
TOTAL	$18.05

Where can you buy a cheaper vacation weekend plus all bee knowledge and pleasure derived from your visit to Rhode Island?

Kingston, Rhode Island is located on the NYNH&H Railroad route out of New York and Boston. All Pennsylvania trains out of both Pennsylvania Station, New York, and South Station, Boston, stop at Kingston. Taxi and Bus service available out of Kingston Station.

Michigan Summer Meeting and Picnic

Date—Friday, July 20th, 1956.

Beginning Time—10:00 A.M. with a Beginners' Demonstration.

Place—Ionia Free Fair Grounds at Ionia, Michigan.

Bring a picnic lunch folks, with enough for supper. The last two meetings have been well attended and very successful. Mark your calendar now. Details of the program should be ready for the next newsletter.

Southern States Federation—American Bee Breeders—Tenn. Association—Chattanooga Area—October 10-12

Come to Chattanooga's Hotel Patten October 10th, 11th, and 12th to meet with four groups of beekeepers, the Southern States Beekeepers' Federation, the American Bee Breeders' Association, the Tennessee Beekeepers' Association, Inc. and the Chattanooga Area Beekeepers. There will be a good program. Details later. Come and meet with friends. Reach Chattanooga on U. S. Routes 11, 27, 72, 64 and 41. All pass by Hotel Patten.

Carl M. Teasley
Secretary-Treasurer

Westchester County, New York
Bethel, June 17

The Westchester County Beekeepers Association will hold its first outdoor meeting on Sunday, June 17th at the *summer cottage* of Mr. and Mrs. Eugene L. Morrison, at Bethel, Sullivan County, New York.

At this meeting all members and visitors are urged to bring their Picnic Lunch. Coffee and soft drinks will be furnished by the Association. There will also be several portable fireplaces, if anyone wants to make use of them.

Get an early start, so that we can all meet by 12 noon. Please wear walking shoes and comfortable clothes. Follow these directions:

To the Morrisons at Bethel, Sullivan County, New York enter new York Thruway at Central Avenue, Yonkers or at Elmsford, from Route 119, or at Tarrytown. Drive 32.4 miles from Tappen Zee bridge toll booth, to exit 16 drive 44 miles on route 17—past Monroe, Chester, Goshen and Middletown, through Bloomingburg, Wurtsburg, and Monticello—to sign "Liberty and Binghamton". Here 17 *turns sharp right.* Drive 7/10 miles on 17 to 17B; turn left on 17B and—drive 9.8 miles through White Lake to Bethel general store and post office. (on right side of road—Texaco gas pumps). Drive 1.4 miles on 17B to Crossroad and *turn left.* Drive 2.9 miles *to the Morrisons.* 91.2 miles.

Mrs. Alfred Roth
Publicity

Pennsylvania Short Course,
August 13-17

A one-week short course of interest to those who work with bees will be held at The Pennsylvania State University August 13 to 17. Any interested adult may enroll for this very practical short course by writing to the Director of Short Courses, College of Agriculture, The Pennsylvania State University, University Park, Pennsylvania.

The following topics will be discussed in this course: secrets of the hive, making a start in beekeeping, selection and assembling of equipment, spring management, swarm control, honey production, requeening, fall and winter management, extracted honey and its care, queen rearing, diseases, and marketing.

Much of the work will take place in the University apiaries with the members of the course actually participating. Persons attending should bring a bee veil with them. Complete details of the program will be in the July issue.

Middlesex County (Mass.)
June 30th, Andover

The Middlesex County Beekeepers' Association (Mass.) will hold its second outdoor meeting at the home and apiaries of Mr. and Mrs. Henry Neunzer, Woburn Street, Andover, Mass. Henry is our hardwarking president, and we look forward to having our first meeting at their new location in Andover. The meeting will be held on Saturday, June 30, at 2:00 P.M.

Our first outdoor meeting of the summer season was held on Sat., May 26, at the home of Mr. and Mrs. S. W. Dickson, in Groton, Mass. The Dicksons have a lovely spot in Groton, and a large number of members and guest arrived to enjoy our first outdoor meeting.

L. C. Procter
Secretary

Midwestern (Kansas), June 10, Mission

The Midwestern Association will meet Sunday, June 10th, at the home of Glen Borchardt, Jr., 5401 Newton, in Mission, at 2:30 p.m., one block west and 6 blocks north of Shawnee Mission High School. The program will be based on production: section honey; cut comb honey; and extracted honey, conducted by H. J. Schaffer. Drawing prize and refreshments. Anyone interested in beekeeping is welcome.

Mrs. William Brite
Secretary

Eastern Missouri, June 6, Clayton

The June meeting of the Eastern Missouri Association will be Tuesday, June 6th, 7:30 p.m. on the second floor of the old building, Clayton Court House. Henry Kaiser, Summerfield, Illinois, has been asked to give us a talk on bees.

Ray Reinhold
Secretary.

Illinois Mid-Summer Meeting, July 22, Champaign

In our most recent information from Dr. V. G. Milum we learn that Sunday, July 22, will be the date for our Mid-Summer meeting. Dr. Milum is planning this meeting and anything Dr. Milum plans will be worthy of any one's attendance, especially those beginners that are always lamenting that the rank and file beekeepers' meetings are too technical for them. At Champaign they may receive instruction from nailing up hives and frames to hiving swarms and taking off the crop. The professional apiarist who thinks he knows it all can learn something too at this meeting if he will take the time to do so. Mark this date on your calendar and make plans to be present along with the rest of Illinois' most progressive beekeepers on July 22, 1956.

Hoyt Taylor
Secretary

Tri-State, Mid Summer Meeting, July 7th, Sioux City, Iowa

The Tri-State Mid-summer meeting will be in Sioux City, Iowa, July 7th. The Sioux Honey Association will be hosts.

Worcester County (Mass.) Manchaug

The Worcester County Association will hold its second outdoor meeting at the home of Mr. and Mrs. Chester Roaf, 2nd New Village, Manchaug, Mass. A picnic supper will be held after a business meeting. Please bring chairs and table. Coffee will be served. A cordial invitation is extended to all beekeepers.

A. W. Rozenas
Publicity Chairman

Connecticut Summer Meeting, June 23rd, Woodbridge

The Connecticut Beekeepers Assn. summer meeting will be held June 23, 10 A.M. at Ed. Labrake's, Bradley Heights, Woodbridge, Conn. and the speaker will be Paul L. Holcombe of New Jersey. His talk will be on General Beekeeping. Plans for the exhibit at the R. I. meeting of the E.A.S. will be discussed. Lunch will be potluck with coffee furnished. Beginners in beekeeping and out of state visiting beekeepers are welcome.

At the recent April meeting the following officers were elected: President, Chester Niles, 35 New Rd., Mt. Carmel; Sec'y. Miss Lois Baker, Brooklyn; Treas. Edwin LaBrake, Woodbridge Chairman of Pub., P. J. Hewitt Jr., Litchfield; Pres. of Ladies Aux., Mrs. M. Louise Yates, 15 Chapman St., Hartford.

Justin H. Caswell, Middleboro, Mass. gave a talk on the problems in beekeeping in pollination service in pollinating cranberry areas of Cape Cod. John Sheard of the Conn. Exp. Station talked on the control of injurious insects in home garden plantings. The kinds of chemical poisons used and the timing of application to kill the largest numbers of pests were discussed. Symptoms of insect attack were described. A tape recording of the talk by Cale at Biloxi, Miss. was heard through the courtesy of Gaston Levitre, R.I.

Philemon J. Hewitt Jr.
Chairman of Publicity

1957 Federation Convention Site

The Lafayette Hotel, Long Beach, California, has been selected as the site of the 1957 Federation Convention to be held January 28 through February 1, 1957

The Los Angeles County Beekeepers Association will be our hosts and their committee is already busy making plans. Ray R. Reed has been appointed Chairman of the Host Committee.

Colorado Summer Meeting, June 23, Rifle

The summer meeting of the Colorado Association is tentatively set for June 23rd, in the Rifle Mountain Park, near Rifle. Mr. Limbach is chairman of the meeting.

Northeast Arkansas Association

A meeting of the Northeast Arkansas Association was conducted at the State College, Jonesboro, Arkansas, April 28 with 51 present.

President E. E. Turner of Vandalle presided. Door prizes provided by Dadant and Sons, Paris, Texas, and by Walter Kelley of Clarkson, Kentucky, were given at different times throughout the day. Dr. H. P. Boles, Assistant State Entomologist, spoke on the physical faculties of the honeybee. Raymond Fischer, packer of North Little Rock, gave a demonstration with a colormeter on how to determine the color of honey, then how to use a moisture gauge to determine moisture content in packing honey for the market. Homer W. Richards of El Dorado, represented the South Arkansas Association and spoke on the activities of that organization. During the business session a motion prevailed to ask the legislature to transfer the operation of the inspection work in Arkansas to the Extension Service and the University of Arkansas. E. E. Turner was re-elected President A. T. Caldwell of Leachville was elected Vice President; Ray L. McLester, re-elected Secretary-Treasurer. The August session will be at the Jonesboro State College.

In Memoriam

Orpha Stewart

Wife of Lee Roy Stewart, Newport, Indiana, Friday, May 11th. Lee was scheduled for all four of the Indiana Regional meetings, but wired about his loss. I was at both of the Southern meetings and went directly to Newport from Versailles. Burial had been that morning. Orpha will be remembered by many beekeepers as the hostess of Lee's famous Wabash Valley Roundups. We have known this family many years and we know how important she was in all the beekeeping activities. Lee, now retired, and the daughters, Mary Jane (Terre Haute) and Eva (San Antonio) will feel like the bottom has dropped out of life. Our sympathy is with them.

G. H. Cale

Mrs. LeRoy Stockdale

Mrs. LeRoy Stockdale of Edgewood, Illinois, wife of former State Association President, now Treasurer of the Association, passed away and was buried on April 26th. We extend our sincere sympathy to Mr. Stockdale and the family.

Charles P. Cornell, Past President of R. I. Beekeepers Association passes on in 90th year

Charles P. Cornell one of the most active Presidents of the R. I. Beekeepers Association and Country Gentleman farmer passed away during the month of April. Old time Rhode Island beekeepers will remember well the good times and interesting beekeeping meetings held at Mr. Cornell's residence in Buttonwoods. For a time Mr. Cornell was actively engaged in queen rearing and the queen rearing apiaries were under the supervision of Howard A. Pike, Apiary Inspector for Rhode Island. Mr. Cornell maintained a clothing store on South Main Street in the Providence area for a number of years and kept colonies of bees in the back room of the store and the bees could be seen flying in and out the window. Many old time Rhode Island beekeepers will remember the cracker barrel sessions at the Cornell store.

QUEENS

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KELLEYS ISLAND stock queens grown on our own bee farm and rushed out daily from Clarkson by air mail.

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25-99 Prepaid air mail	.75 each
100 and up Prepaid air mail	.70 each

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The only worthwhile Queen Excluder on the market

- Accurate spacing
- Allows maximum bee passage
- Better ventilation
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Editorial . . .

Proposed New Grades for Comb Honey

The Agricultural Marketing Service of the U. S. Department of Agriculture has announced that it is considering revision of United States Standards for Grades of Comb Honey. We urge that anyone interested in grading comb honey write for a copy of the proposed regulation because all persons desiring to file data, views, or arguments relative to these grades should do so before December 31, 1956. These should be filed with the Chief, Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, Agricultural Marketing Service, U. S. Department of Agriculture, South Building, Washington 25, D.C.

The proposed regulation would establish three "styles" of comb honey: (a) Style I—Section Comb Honey—meaning comb honey in the original section; (b) Style II—Cut Comb Honey — Wrapped — meaning comb honey cut into practically uniform pieces and packed in transparent leakproof cartons and (c) Style III—Cut Comb Honey—in Extracted Honey (Chunk Honey) — meaning comb honey cut into practically uniform pieces and packed in extracted honey.

For the three "styles" of comb honey, four grades are established: U. S. Grade A or U. S. Fancy; U. S. Grade B or U. S. No. 1; U. S. Grade C or U. S. No. 2; and Substandard.

U. S. Grade A is the quality of comb honey that contains honey having not less than 81.4% soluble solids; that possesses a good flavor for the predominant floral sources; that is practically uniform in color; that is practically free from defects; that possesses a good character; and that scores not less than 90 points when scored in accordance with the outlined scoring system. The minimum net weight of section comb honey of this grade shall not be less than 12 ounces avoirdupois unless otherwise specified.

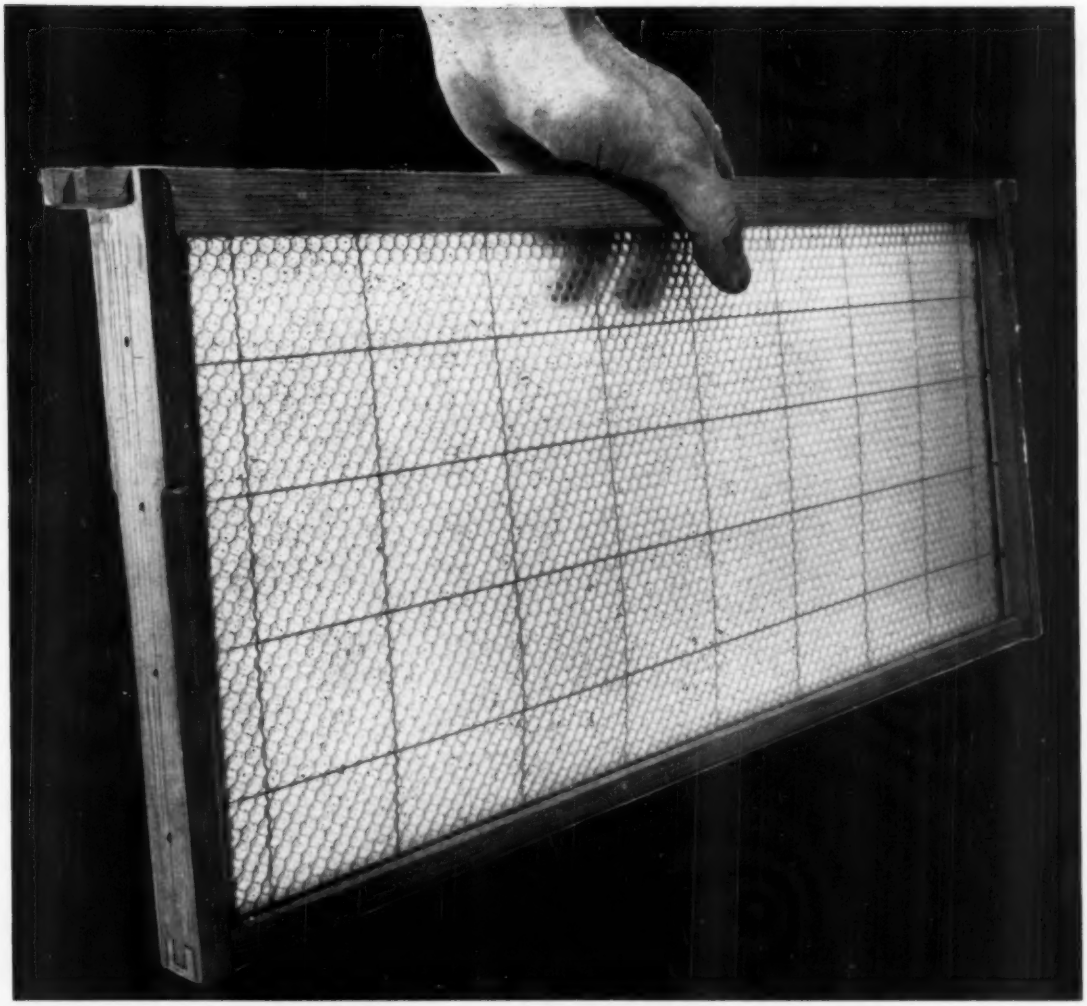
U. S. Grade B comb honey contains honey having not less than 81.4% soluble solids; that possesses a reasonably good flavor; that is reasonably uniform in color; that is reasonably free from defects; that possesses a reasonably good character; and scores not less than 80 points; *Provided,* That the comb honey may be fairly uniform in color if the total score is not less than 80 points. The minimum net weight of section shall not be less than 11 ounces unless otherwise specified.

Grade C comb honey is that quality having not less than 81.4% soluble solids; that possesses a fairly good flavor; that is fairly uniform in color; that is fairly free from defects; that possesses a fairly good character; and scores not less than 70 points. The minimum net weight shall not be less than 10 ounces unless otherwise specified.

Substandard is the quality of comb honey that fails to meet the requirements of U. S. Grade C.

Now, if the reader isn't quite mystified by the proposed grading regulation up to now—trying to judge what is practically uniform, reasonably uniform, or fairly uniform, for example—there follows twenty-one more mimeographed pages which are bound to completely confuse all those but a few experts and the Washington authors of the proposed regulation. And it is useless to add that all is based on whether something is practically so, reasonably so, or fairly so —so help me!

In the point scoring system, a maximum of 40 points are designated for flavor; 20 points for color in spite of the fact that color of honey is not a factor of quality for the purpose of these grades; 30 points for freedom from defects; and 10 points for character which refers to the comb being tender. Perhaps we can explain the grading of flavor. If it is good, you score 37-40 points; if it is reasonably good, 34-36; and if fairly good, 31-33 points. That's simple, isn't it? But it would take several pages of this Journal to tell you how "freedom from defects" is scored for the three "styles" of honey, and then we'd place two wagers: (1) That you still would be confused, and (2) that a majority of comb honey produced in the good old U.S.A. wouldn't grade above U. S. Grade C. And that's not good, we think.



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30 Frame Extractor	190.00	
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Sioux Honey Association

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Boyd, Wisconsin

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Prices After May 20th, 1956

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In Lots of	Queens	2 lb. & Q.	3 lb. & Q.	4 lb. & Q.	5 lb. & Q.
1-24	$ .85	$3.50	$4.25	$5.00	$5.75
25-99	.75	3.00	3.75	4.50	5.25
Large lots	.70	2.75	3.50	4.25	5.00

TESTED QUEENS $2.00 EACH

Queens Postpaid—Airmailed—Clipped—No Extra Cost
For Queenless package Deduct Price of Queen.
Packages F.O.B. Shipping Point

THE STOVER APIARIES

Mayhew, Mississippi

Items from Here and There

Selection of Locations . . .

Dr. H. M. Fraser in his column in British Bee Journal for Sept. 15 quotes from a German Bee Magazine an extract stating that for each 1,000 kilometers (about ⅝ mile) the hive is from its source of nectar you may expect a reduction of one sixth on the honey harvest, and more in unfavorable weather.

Whether the percentages are correct, at any rate it certainly behooves the beekeeper to place his apiaries so that they may at the same time, profit as much as possible from minor nectar sources, and be as near to the major source of nectar as possible.

Seed Prices Down

The crop reporting board of U. S. Department of Agriculture reports prices of farm seeds down approximately 19% from the top in mid-February 1955 and 10% lower than September 15. Of the 33 seeds reported only crested wheatgrass, smooth brome, Ladino clover, and Orange sorgo were at last year levels or above.

Canadian Import Regulations Less Rigid

In June last year the Canadian Government made a number of amendments to its regulations concerned with the importation of bees, beekeeping equipment, and beeswax into Canada. The regulations concerned were those which come under the Animal Contagious Disease Act, administered by the Health of Animals Division, Department of Agriculture, Ottawa.

"Health From The Soil"

In the British Bee Journal for February 16 appears an article by Mr. A. J. Emms in which he emphasizes the possibility that much of our difficulty with various disease has been caused by the excessive use of artificial fertilizers which might not have necessary mineral salts and other trace elements desirable for best health. He recognizes that this is a controversial subject but insists that it is applicable to all the food we get from the soil including nectar from the flowers.

Crops and Market

by **M. G. Dadant**

Condition of Bees

The northern areas extending from New York through Pennsylvania, Ohio, and through to the Dakotas, and including the eastern provinces of Canada are reporting bees in below average condition and considerable losses due to the late spring. All in all we believe in these areas the losses have probably been heavier than a year ago.

In the southeastern areas, however, conditions of bees are quite satisfactory and this apparently applies throughout all of the South and into Texas, except that the Florida conditions, at least earlier, were tempered by so much drought that the bees were unable to make a living. However, late rains seem to have somewhat remedied this.

In the Plains area, bees are in fair to average condition and in the intermountain area and on the west coast probably somewhat above normal.

Condition of Plants

The condition of plants has improved over the past 30 to 60 days and now appears quite favorable in most localities owing to substantial rains. However, this does not mean that the subsoil has in any way been properly moistened and as a general rule we may say that the amount of rainfall has not been sufficient and that continuing rains will be necessary to keep honey plants in condition for the flow.

It is true, however, that in the eastern and southeastern areas poor conditions have changed quite remarkably owing to more rainfall and satisfactory weather.

There does seem to be perhaps a scarcity of honey plants in the Plains area, extending from Oklahoma northward into Nebraska and thence northeast into Minnesota. The same might quite readily apply to the eastern Canadian provinces.

On the west coast, the conditions of plants in general are quite satisfactory owing to more than average rainfall and this applies particularly to the desert areas.

The Honey Crop

At this date, about the only crop which can be generally reported is that from the citrus fruits. The Florida crop was a disappointment, probably not over 75% of a year ago, although the late rains have brought forth additional bloom and probably will mean some surplus honey. The crop in the Rio Grand Valley is only average and in California probably less than average, due both to inclement weather and to the fact that the enormous areas set aside for housing and settlements have reduced considerably the acreage of citrus fruits. As a consequence, the new honey crop is moving quite satisfactorily, in fact may all be moved by this time at prices which will approach the top.

Returning to the Southeast, we recall that a year ago tulip poplar was a failure owing to a hard freeze, but this year conditions are satisfactory and bees are not only building up but are gathering a crop, and of course, putting themselves in excellent condition for the later hoped-for crop from sourwood.

In the Central South, namely Kentucky, Tennessee, and extending into Arkansas, crimson clover has yielded well and reports are quite favorable.

Increase

We find quite spotted conditions. Naturally, some commercial producers and some beginners are going to increase in view of the satisfactory crop of a year ago. On the whole, however, we believe that the increase is going to be devoted largely to filling up of vacant equipment and also to making up winter losses, and this applies particularly to the northern border states and also to Quebec, Ontario, and extending into Manitoba and Saskatchewan.

We do believe that there will, on the whole, be some increase in number of colonies over a year ago, especially in view of the extremely good possibilities in California for the desert areas. While orange may have been short, the possibilities from sage and other wild plants are excellent and, of course pretty generally a crop can be planned upon from the alfalfa and vetch areas.

On the whole, we believe conditions are perhaps better than a year ago for a crop throughout the country. The bees possibly in not quite as good condition but prospects especially good if we get rains at the right time.

Honey Wanted— Cars and less than car. Top Prices.
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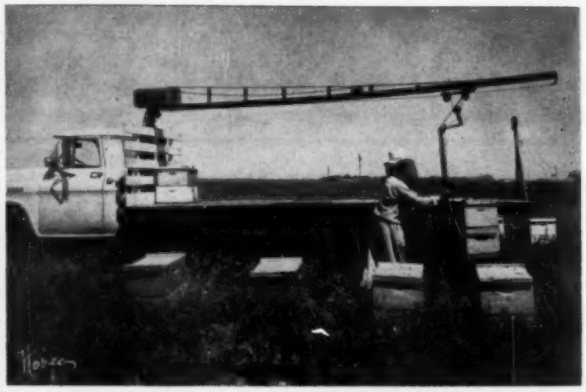

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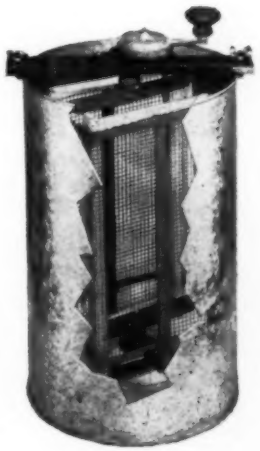

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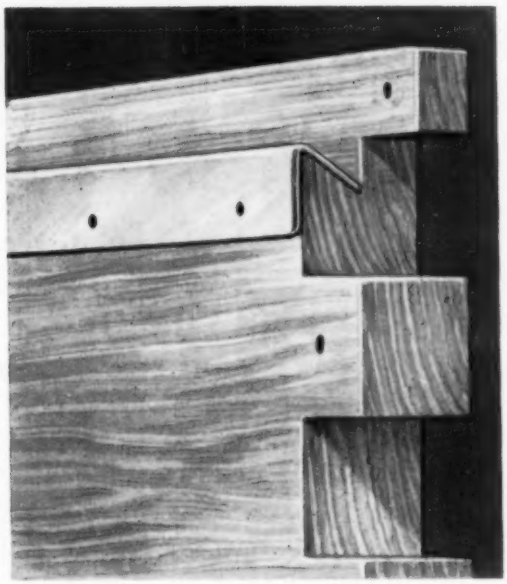

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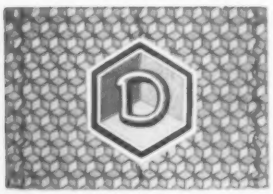

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